EXHIBIT 37

IN THE UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

IN RE JOHNSON & JOHNSON TALCUM POWDER PRODUCTS MARKETING, SALES PRACTICES, AND PRODUCTS LIABILITY LITIGATION ***THIS DOCUMENT RELATES TO:*** ***Newsome, et al. v. Johnson & Johnson, et al.*** ***3:18-cv-17146***	**MDL NO. 16-2738**

RULE 26 EXPERT REPORT OF TERI LONGACRE, MD

Date: May 28, 2024

Teri Longacre, MD

I. BACKGROUND AND QUALIFICATIONS

I am a board-certified diagnostic surgical pathologist at Stanford Medicine with subspecialty expertise in gynecologic pathology. I received my medical degree in 1985 from the University of New Mexico School of Medicine in Albuquerque, New Mexico, where I completed my residency training in anatomic and clinical pathology. Following residency, I completed a fellowship in surgical pathology at Stanford University. Thereafter, I took a position as Assistant Professor at Stanford University and rose through the ranks of the professoriate to my current position as Professor of Pathology. I am the Emerita Richard L. Kempson Endowed Chair in Surgical Pathology at Stanford University School of Medicine, where I serve as Director of Gynecologic Pathology and Director of the ACGME-approved fellowship in Gynecologic Pathology, a program I founded in 2007. In addition, I am the Director of Gastrointestinal Pathology and Director of the ACGME-approved fellowship in Gastrointestinal Pathology, a program I also founded in 2013. I am the former Director of the Stanford Hospital Tissue Committee and a former member of the Stanford Care Improvement Committee, which oversees the quality of patient care in the hospital. In addition to many other extramural committee appointments, I am a former President of the Association of Directors of Anatomic and Surgical Pathology, in part due to my prior work as a Director of Surgical Pathology at Stanford.

I have internationally recognized expertise in benign and cancerous conditions of the female reproductive system, including cancers of the ovary, uterus, cervix, vagina and vulva, and have published extensively in the peer-reviewed medical literature on gynecologic pathology. I provide continuing medical educational lectures on gynecologic pathology to practicing pathologists regionally, nationally and internationally, and have authored and co-authored numerous review articles, book chapters and a textbook in gynecologic pathology. I also provide annual resident and fellow lectures at Stanford Medicine in the areas of non-neoplastic and neoplastic gynecologic pathology and examine gynecologic pathology specimens, including ovarian cancer specimens, on a routine basis. I have published and lectured extensively on the topic of ovarian cancer pathology. Because of my expertise in gynecologic pathology, I was invited to become a member of the American Board of Pathology Test Committee, which provides gynecologic pathology questions for the certification exam for pathology residents and for the maintenance of certification exam for practicing pathologists. I co-authored the 4th edition of the World Health Organization (WHO) Breast and Gynecologic Tumours, and am an expert editor and co-author of the 5th edition of the WHO Classification of Tumours: Female Genital Tumours. I am also editor of the 7th edition of Sternberg's Diagnostic Surgical Pathology and associate editor of the chapters on gynecologic pathology in that book. I am a member of a number of pathology societies and editorial boards, a list of which is provided in the attached curriculum vitae (Exhibit A), which also sets out my education and training in detail and lists my peer-reviewed publications, committee appointments, invited lectures and active grant funding.

My clinical diagnostic activities chiefly include examination of surgical gynecologic and gastrointestinal specimens, including small biopsies and large organ resections. My annual case volume amounts to 5,000 to 7,500 cases; one-half to one-third are gynecological cases and of those, twenty to thirty percent are ovarian cancer cases. In addition to anatomic pathology, I am board certified in clinical pathology, which enables me to integrate findings in the areas of chemistry, hematology, microbiology, immunology, molecular pathology and other special laboratory studies as they relate to my practice of gynecologic pathology. In this capacity, I

routinely provide clinical and pathologic consultations to physicians at Stanford Medicine; this entails macroscopic (gross) and microscopic review of surgical pathology specimens and review of relevant clinical information to render informed patient diagnoses. I am a regular participant in the Stanford Gynecologic Oncology Interdisciplinary Tumor Board as well as several Gastrointestinal Tumor Boards. In addition to the clinical work I provide for Stanford patients, I also receive requests for my consultative opinion from both pathologists and treating physicians regionally, nationally, and internationally.

My opinions are held to a reasonable degree of medical and scientific certainty and are based on my education, training and experience, as well as my clinical and scientific research, general knowledge of the literature, my pathologic review of thousands of ovarian cancer cases throughout my career, and my review of the relevant medical records and pathology in this case. I reserve the right to amend or supplement my opinions, if additional, relevant information becomes available to me. The references and attached materials list (Exhibit B) include many sources that I have considered in forming my opinions; of course, it is impossible for me to identify here all sources of information I have considered over the many years of my career.

I am compensated at a rate of $600 per hour for consulting on this case.

II. OVARIAN CANCER

Ovarian cancer is not a single disease. It comprises a set of distinct cancers, each of which exhibits different clinical, histological, epidemiological, and molecular underpinnings. Ovarian cancer can be separated in to two broad groups: epithelial ovarian cancer and non-epithelial ovarian cancer (e.g., germ cell, sex-cord stromal tumors), as well as a variety of miscellaneous tumors and metastases. The plaintiffs' expert reports focus on epithelial ovarian cancer, and not any other type of ovarian cancer.

A. Epithelial Ovarian Cancer (EOC)

Epithelial ovarian cancer (EOC) is the most common type of ovarian cancer and is comprised of multiple, distinct diseases, including high-grade serous carcinoma (HGSC), low-grade serous carcinoma (LGSC), mucinous carcinoma, endometrioid carcinoma, clear cell carcinoma, and other rare subtypes.

HGSC is, by far, the most common type of EOC. These tumors arise from tubal-type epithelium, usually in the fallopian fimbria and, less commonly, on the ovarian surface or within ovarian epithelial inclusion cysts. For those that arise on the ovarian surface or within inclusion cysts, the current belief is that these result from deposition of fallopian tube epithelium that subsequently undergoes transformation at these sites. Nearly every HGSC, including precursor lesions, harbors a deleterious mutation in the *TP53* tumor suppressor gene, which is considered to be one the earliest known molecular events in the development of HGSC (Ahmed 2010; Vang 2016). In addition, HGSC are deficient in homologous recombination and lack the ability to repair double strand DNA breaks. About 10% to 12% of women with HGSC carry germline mutations in the *BRCA1* or *BRCA2* genes. An additional, smaller percent of HGSC occur in association with germline mutations in other homologous recombination genes (Song 2014). Additional genes that have been associated with hereditary ovarian cancer include the tumor suppressor gene, *TP53*, in

the Li-Fraumeni syndrome, as well as several other genes involved in the double-strand breaks repair system, such as *CHEK2*, *RAD51C, RAD51D, RAD50, BARD1, BRIP1*, *MRE11A,* and *PALB2* (Madariaga 2019). Recent literature suggests that close to 25% of ovarian cancers are associated with germline mutations, and of these, 29% have mutations in genes other than *BRCA1* or *BRCA2*. (Frey 2017). Other patients may have a clear familial predisposition to developing ovarian carcinoma for as yet unknown reasons. The *BRCA1*/2, *CHEK2*, *RAD51*, *BRIP1*, *BARD1*, *MRE11A*, and *PALB2* genes encode proteins that play a critical role in maintaining genomic stability by promoting error-free DNA repair. (Gudmundsdottir 2006; Toss 2015). Approximately one-third of sporadic HGSC may also contain somatic *BRCA1* or *BRCA2* mutations, *BRCA1* methylation, or genomic aberrations in these other homologous recombination genes. (Madariaga 2019).

Ovarian cancers associated with homologous recombination defects exhibit a series of characteristic morphologies. Most are HGSC with marked nuclear pleomorphism with giant bizarre nuclei and high mitotic index (Fujiwara 2012; Soslow 2012). They also tend to show a solid, pseudoendometrioid, or transitional cell carcinoma-like ("SET") morphology (Soslow 2012). When T-cell subtypes are examined, *BRCA1*/2-mutated tumors exhibit significantly increased CD3+ and CD8+ tumor infiltrating lymphocytes, as well as elevated expression of PD-1 and PD-Ll in tumor-associated immune cells compared to homologous recombination-proficient tumors. Women with *BRCA1*/2-mutated HGSC tend to have a better overall prognosis and response to chemotherapy (particularly PARP-inhibitors) than women with non *BRAC1*/2-mutated HGSC (Dann 2012).

It is now well established that a significant majority of so-called "ovarian" HGSC arise from the distal fimbrial end of the fallopian tube from a precursor lesion known as serous tubal intraepithelial carcinoma (STIC). Criteria for site-assignment in extrauterine HGSC have been proposed (Singh 2015; McCluggage 2015; Singh 2014; Singh 2016; Singh 2016b) and the use of these criteria result in a high-proportion of previously presumed "ovarian" HGSC (approximately 80%) being classified as tubal in origin, while primary peritoneal HGSC are exceedingly rare. A diagnosis of primary peritoneal HGSC should only be made when there is no ovarian parenchymal HGSC and no mucosal STIC or HGSC within either tube, both of which should be grossly visible in their entirety and histologically examined in total using a SEE-FIM protocol.

Clinically, HGSC are aggressive tumors that primarily affect older women (median age at diagnosis is 63) (SEER Cancer Stat Facts: Ovarian Cancer, 2024). Most patients (75%) who develop HGSC present in advanced stage (FIGO III-IV), and there is no currently accepted approach to reduce mortality through early detection (Goff 2000; Hogg 2004). The 5-year survival of women with advanced stage disease is about 20% compared with 80-90% for those with FIGO stage I-II disease. While HGSC often responds to standard platinum-based chemotherapy, prevention strategies have largely been through surgery: prophylactic and risk-reduction salpingo-oophorectomy in women who are at elevated risk, such as those with germline *BRCA* mutations or strong family cancer histories (Kauff 2002). Prophylactic salpingo-oophorectomy reduces the risk of *BRCA*-related gynecologic cancer by 96% (Haber 2002). Although the risk of ovarian cancer is diminished, there remains a small risk (0.8-1%) of subsequently developing a peritoneal HGSC, especially in women who have mutations in the *BRCA1* and *BRCA2* genes (Casey 2005). Oral contraception use appears to reduce the risk of HGSC, as do number of term pregnancies and breastfeeding. The protective effects of these apparent diverse risk-reducing factors is attributed

to interruption of ovulation and hence, decreased proliferation of the tubal epithelial cells now believed to be involved in the development of HGSC. A recent study that demonstrated tubal ligation results in decreased proliferation of the progenitor cells in the distal fallopian tube corroborates this theory (Tiourin 2015).

HGSC is now believed to be distinct from low-grade serous carcinoma (LGSC). Except for their shared morphologic resemblance to tubal-type epithelial cells, HGSC and LGSC differ in genetic abnormalities, pathways of tumorigenesis and clinical behavior. Whereas HGSC is an aggressive tumor affecting older women, the clinical course of LGSC is typically more prolonged, with LGSC typically affecting women of somewhat younger age. LGSC is more refractory to chemotherapy than HGSC, probably because of the lower proliferative rate of the former. LGSC arises by step-wise progression from benign through borderline to malignant tumors, while most HGSC arises de novo in the fallopian tube. While HGSC commonly shows mutations in *TP53* and *BRCA1* or *BRCA2*, LGSC is more likely to have mutations in *BRAF*, *KRAS*, and *NRAS* (Romero 2020). Women with germline *BRCA* mutations are at increased risk of HGSC, but not of serous borderline tumor or LGSC, further underscoring differences in pathogenesis between HGSC and LGSC. LGSC is not associated with mutations in homologous recombination genes. The histologic distinction between HGSC and LGSC is based primarily on nuclear features, with less than three-fold variation in nuclear size in LGSC. A secondary diagnostic criterion is mitotic activity, LGSC having less than 12 MF/10 HPF. There are also differences in architectural features between LGSC and HGSC, with micropapillary architecture and psammoma bodies more common in the former, while HGSC frequently shows solid growth pattern, at least focally, which is an uncommon feature in LGSC. With the exception of p53, immunohistochemistry is not particularly helpful (and is seldom required) to separate LGSC and HGSC.

In contrast to HGSC, endometriosis is a well-recognized precursor of ovarian endometrioid carcinoma and clear cell carcinoma. At least 25% of ovarian endometrioid carcinomas will have foci of concomitant endometriosis on pathologic examination, while up to 47% of clear cell carcinomas have foci of concomitant ovarian endometriosis on pathologic examination and up to 68% have concomitant endometriosis in the pelvis (Fadare 2019). Accordingly, when endometriosis is found in the overall specimen, pathologists regard this as compelling evidence of an origin from endometriosis, even in the absence of a demonstrable transition from endometriosis. Endometriosis is commonly associated with adenomyosis in the uterus; an MRI study documented a prevalence of endometriosis in the setting of adenomyosis of 80.6% and a prevalence of adenomyosis in the setting of endometriosis of 91.1% (Zannoni 2020; Leyendecker 2015). Data from RNA transcriptional and DNA methylation analyses suggest differences in menstrual cell cycle state (e.g., proliferative or secretory) of endometrial progenitor cells may account for the different cellular phenotypes and clinical behaviors of endometrioid and clear cell carcinomas (Beddows 2024).

Endometrioid carcinomas exhibit morphologic features that resemble uterine endometrial carcinoma and are graded similarly (i.e., FIGO grade 1, 2 or 3), depending on the degree of glandular differentiation and the presence of cytologic atypia. Like their uterine counterparts, they often exhibit foci of squamous metaplasia. They harbor mutations similar to those seen in the uterine corpus (*PTEN, PIK3AC, CTTNB1, ARID1A*). Mutations in *TP53* are uncommon (no more than 11%-24%), particularly in the lower grade tumors, and they are not associated with genomic aberrations in homologous recombination genes. Endometrioid ovarian carcinomas often express

the receptors for estrogen and progesterone. Mismatch repair protein deficiency can be seen in almost 20% of tumors and 3%-10% harbor mutations in *POLE*. Up to 30% of ovarian endometrioid carcinomas are associated with endometrioid endometrial carcinoma (Romero 2020). A family history of ovarian endometrioid cancer in a first-degree relative, or any ovarian cancer, has been associated with an increased risk of ovarian endometrioid cancer, with relative risks that range from 2.81 to 3.81 (Fadare 2019).

Clear cell carcinomas have a distinct appearance characterized by clear or eosinophilic cells arranged in papillae, cysts, and solid nests. They are not graded. Like endometrioid carcinomas of the ovary, they are not associated with genomic aberrations in homologous recombination genes. Like ovarian endometrioid carcinoma, ovarian clear cell carcinoma may be associated with mutations in *ARID1A*, which is currently considered an early molecular event when these tumors arise from endometriosis. Other gene mutations include *PIK3AC, KRAS,* and *PPP2R1a*. Mutations in *TP53* are uncommon (no more than 20%) (Romero 2020). Clear cell carcinomas typically do not express receptors for estrogen and progesterone. Like ovarian endometrioid carcinoma, ovarian clear cell carcinoma may be associated with mutations in genes that encode DNA mismatch repair proteins (Bennett 2016). These mutations may be somatic or germline. Germline mutations in these genes are seen in patients with Lynch syndrome, a hereditary cancer syndrome that is associated with increased risk of developing carcinomas in the uterine corpus, ovary, colon, and renal pelvis, as well as a variety of other organs. Approximately 11% of all ovarian carcinomas arise in women with Lynch syndrome; most of these are endometrioid, clear cell, or undifferentiated.

Ovarian mucinous carcinoma is uncommon; because of the identification of a background teratoma or Brenner tumor in some cases, an ovarian teratoma or Brenner tumor has been considered a possible precursor (Simons 2020). Ovarian mucinous carcinoma is typically unilateral and low stage. Many of these tumors arise in the background of a mucinous borderline tumor. When recurrences occur, they do so early. Response to standard chemotherapy is poor. *HER2* amplification and overexpression is present in approximately 16% of cases, and targeted therapy against HER2 has been proposed for use in these cases. Ovarian mucinous carcinoma is typically not associated with mutations in homologous recombination genes or DNA mismatch repair genes. The most common gene mutations are *CDKN2A* (76%), followed by *KRAS* (64%) and *TP53* (64%), and less commonly, *BRAF*, *PIK3CA* and *ARID1A* (Romero 2020).

Carcinosarcoma contains malignant epithelial and malignant mesenchymal elements, each of which are derived from the same clonal origin. The epithelial component is usually high grade and most often resembles serous or endometrioid carcinoma, but malignant mucinous, squamous, or clear cell elements or undifferentiated carcinoma, including small cell carcinoma of the pulmonary type, may be encountered as well. The mesenchymal component may have the features of a fibrosarcoma, leiomyosarcoma, endometrioid stromal sarcoma, or nonspecific sarcoma, or, in heterologous tumors, a rhabdomyosarcoma, chondrosarcoma, or osteosarcoma. Intracellular and extracellular hyaline droplets, which are PAS-positive, may be present in the sarcomatous and sometimes in the carcinomatous component. Carcinosarcomas develop most often in postmenopausal women (del Carmen 2012). They often harbor mutations in *TP53.*

Mesonephric-like carcinoma is a recently recognized tumor that exhibits morphological and immunophenotypic features suggestive of mesonephric adenocarcinoma, but is not anatomically associated with mesonephric remnants (Pors 2021). Ovarian mesonephric-like carcinomas exhibit

variable histologic patterns including glandular, tubular, papillary, and solid growth. Some cases show intraluminal eosinophilic colloid-like material. These tumors are diffusely positive for PAX8, but negative for ER and PR. GATA3 and TTF1 are both diffusely positive in these tumors. Mutations in *KRAS*, *NRAS*, *BRAF*, *CTNNB1* and/or *PTEN* have been identified in these tumors, supporting Mullerian epithelial derivation. They do not harbor mutations in *TP53*. Although data are limited, they appear to be clinically aggressive and are currently not graded.

Undifferentiated carcinoma exhibits no or only rare and minor foci of epithelial differentiation (Bennett 2021). Less than 5% of ovarian carcinomas are undifferentiated. A subset is associated with Lynch syndrome.

Mixed carcinomas account for less than 3% of ovarian carcinomas and most commonly consist of admixtures of endometrioid and clear cell carcinoma (Ye 2014)), often arising in association with endometriosis or endometrioid and undifferentiated carcinoma (so-called de-differentiated carcinoma).

In addition to the carcinomas described above, there exists a set of serous and mucinous borderline tumors in the ovary.

Serous borderline tumors (SBT) account for the vast majority of all ovarian borderline epithelial neoplasms and comprise approximately 15% of all ovarian serous neoplasms (Vang 2020). SBT is encountered most often between the ages of 30 and 60 years, whereas serous carcinomas are most common between the ages of 40 and 70 years. SBT is typically bilateral and has the capacity for extra-ovarian spread, recurrence, and death, even though the tempo of disease progression is significantly more indolent when compared to LGSC. The molecular profile of mRNA gene expression patterns is significantly different for SBT and LGSC versus HGSC (Gilks 1998), as is the pattern of genetic alterations, e.g., the presence of point mutations in *BRAF* or *KRAS* is more frequently associated with SBT and LGSC, while *TP53* mutation and somatic or germline abnormalities in *BRCA1* and/or *BRCA2* are more frequently associated with HGSC. SBT are composed of architecturally complex branching papillary and micropapillary structures not unlike that of LGSC, but they do not feature destructive invasion of the ovarian stroma. The nuclei are uniform or mildly atypical and mitotic activity is low. Atypical mitotic figures are absent. Transformation to LGSC occurs in at least 7% of women with SBT, occasionally decades after initial diagnosis. Transformation is associated with increased tempo of disease and a significantly more aggressive disease course with approximately 40-50% overall survival. In some instances, transformation is preceded by several recurrences of SBT, which may or may not exhibit increasing degrees of atypical proliferation. In other cases, the transformation appears at the time of first recurrence. Most transformations occur in the omentum, followed by intraabdominal or axillary lymph nodes (Longacre 2005). Very rarely, SBT transforms to a high-grade carcinoma.

Mucinous borderline tumors are composed of enteric-type epithelium (gastric type cells, goblet cells, and occasionally Paneth cells). They occur in women in the fourth to seventh decades, are typically unilateral, and quite large (19 cm in average diameter). They are benign, provided they do not harbor foci of mucinous carcinoma (Talia 2022). They may harbor mutations in *KRAS*.

Seromucinous borderline tumors are distinguished from SBT by the presence of both serous and mucinous endocervical-like epithelial cells with abundant neutrophils, and the more frequent

association with endometriosis. Although these tumors may also be associated with peritoneal implants, no tumor-associated deaths have been reported, and the prognosis is excellent (Talia 2022).

Endometrioid borderline tumors are uncommon (Bell 2000). Up to 40% are associated with endometriosis. They may be bilateral or associated with synchronous endometrioid tumors in the endometrium and/or fallopian tube. Like their malignant counterpart, they are associated with mutations in *PTEN* and *CTTNB* (Oliva 2006) amongst others. They are benign.

B. Non-epithelial Ovarian Cancer

Non-epithelial ovarian cancer consists of tumors derived from the specialized ovarian stroma (sex cord-stromal tumors) and germ cells. Sex-cord stromal neoplasms account for approximately 6% of all ovarian tumors. They contain elements of sex cord and stromal derivation, either pure or in varying combinations. The most common subtype is the fibroma. The remainder exhibit differentiation toward one or more of the following cell types: granulosa cells (most frequent) and Sertoli and/or Leydig cells (least common).

Adult granulosa cell tumor typically occurs in postmenopausal women (Li 2022). Approximately 75% are associated with estrogenic signs and/or symptoms. Adult granulosa cell tumors are unilateral and considered to be of low malignant potential. They may recur decades after diagnosis. Prognosis depends on stage of disease at presentation. They are composed of ovoid cells with euchromatic or hypochromatic nuclei, often exhibiting a "coffee bean" appearance and small, central nucleoli. The cells are arranged in a variety of patterns that vary from solid, insular and trabecular to anastomosing cords. Both macrofollicular and microfollicular (Call-Exner bodies) patterns are often emphasized, but they are absent in the majority of tumors. The microfollicular pattern is characterized by small, generally regular follicles (Call-Exner bodies). Up to 97% of adult granulosa cell tumors harbor a mutation in *FOXL2*.

Juvenile granulosa cell tumor tends to occur in children and young adults (Young 2018). Occasionally, it is seen in older women. Most, but not all juvenile granulosa cell tumors are clinically benign. They are composed of sheets or nodular aggregates of round to ovoid cells surrounding follicles that vary in size and shape and often contain eosinophilic or basophilic secretions. Call-Exner bodies are rare. They are not associated with *FOXL2* mutations.

Sertoli-Leydig cell tumors comprise less than 0.5% of ovarian tumors; they arise from Sertoli stromal cells (Young 2018). These neoplasms occur most frequently in women less than 40 years old (median 28 years old) and may present with hormonal manifestations (androgenic or estrogenic). Tumors are typically unilateral. Well differentiated tumors are considered benign tumors and are not associated with recurrence. In contrast, moderately to poorly differentiated tumors are regarded as malignant neoplasms and have a 5-year survival of approximately 78%. They have a heterogeneous morphology composed of neoplastic Sertoli cells arranged in tubules, cords, trabeculae, or sheet-like architecture and scattered Leydig cells. Heterologous differentiation, most frequently as a gastrointestinal or rhabdomyosarcomatous component may be present, but may also include chondroid, smooth muscle, or neuroendocrine, especially in the moderately and poorly differentiated tumors. The prognosis of these tumors is primarily based on grade, stage and presence of heterologous elements. Most of the moderately and poorly

differentiated tumors are associated with somatic or germline mutations in *DICER1*. DICER1 syndrome is a rare tumor predisposition disorder associated with genetic alterations in the *DICER1* gene located on chromosome 14q32.13. This syndrome presents in children and adolescents and confers an increased lifetime risk of a variety of benign and malignant neoplasms, including tumors of the lung (pleuropulmonary blastoma), gynecologic tract, thyroid (multinodular goiter, thyroid carcinoma), kidney (cystic nephroma, Wilms' tumor), head and neck (nasal chondromesenchymal hamartoma, ciliary body medulloepithelioma), central nervous system (pituitary blastoma, pineoblastoma), and various soft tissue sarcomas (Han 2022).

Microcystic stromal tumor is a rare ovarian neoplasm that occurs in adults (Young 2018). This tumor is composed of small cells arranged in a microcystic pattern masses separated by hyaline bands and fibrous plaques. The cells express nuclear beta-catenin. These tumors harbor a mutation in *CTNNB1* and may be an extracolonic manifestation of familial adenomatous polyposis.

Steroid cell tumors comprise approximately 0.1% of ovarian tumors and are composed of large round or polyhedral steroid cells (Liu 2005). They are divided into Leydig cell tumor and steroid cell tumor not otherwise specified (NOS). Leydig cell tumors arise in the hilus or less commonly, within the ovarian stroma (Leydig cell tumor, non-hilar type) in postmenopausal women, causing hirsutism or virilization in 80% of patients. Occasionally, there are estrogenic manifestations. These tumors are associated with an excellent prognosis. On the other hand, steroid cell tumors, not otherwise specified (NOS) may occur at any age and carry a risk for metastasis. Patients frequently present with virilization due to androgen excess (41%), but occasionally with estrogenic or no endocrine manifestations. In children they may induce isosexual pseudoprecocity or result in Cushing syndrome. The tumors are almost always unilateral and FIGO stage I but 20% of patients have extraovarian extension of their tumors at the time of diagnosis.

Germ cell tumors account for approximately 30% of all ovarian tumors (Euscher 2019). Most (95%) are mature cystic teratomas (dermoid cysts). The frequency of malignant germ cell tumors is higher in countries whose populations are largely Oriental or black, in whom ovarian epithelial carcinomas are relatively uncommon. Germ cell tumors account for two-thirds of ovarian cancers during the first two decades of life.

Mature teratomas, which are almost all cystic (dermoid cysts), account for approximately 25% of all ovarian tumors. These tumors usually develop in children or reproductive age women but are sometimes not detected until years after menopause. Rarely mature teratomas are familial. Mature solid teratomas are occasionally accompanied by mature glial implants, which are almost always associated with an excellent prognosis. Monodermal teratomas include struma (thyroid), carcinoid (neuroendocrine) and strumal carcinoid (thyroid and neuroendocrine), amongst other, rarer subtypes. Mature teratomas are benign, except for those that harbor adult-type malignancies (Euscher 2019).

Immature teratomas are the third most common primitive germ cell tumors, accounting for almost 20% of all cases (Euscher 2019). They are most often found in young adults and children (median, 18 years). One-third of immature teratomas are FIGO stage II or III. These tumors are diagnosed on the basis of immature neuroectodermal elements characterized by neuroepithelial rosettes and tubules or cellular foci of mitotically active glia. Almost 90% to 100% of patients respond to combination chemotherapy with sustained remission. Mature tissue may continue to grow

(growing teratoma syndrome), requiring a second operation. Patients with exclusively mature peritoneal implants, which are composed of glia, almost always have a benign clinical course, even in the absence of postoperative treatment.

Dysgerminomas are the most common of the primitive germ cell tumors; they account for nearly half of such tumors (Warnnissorn 2021). Eighty percent of dysgerminomas develop in women younger than 30 years of age and are rare over 50 years. In patients with associated gonadoblastoma (these tumors often contain areas of calcification), an underlying abnormality in gonadal development may or may not be clinically apparent. Dysgerminomas are often unilateral and low stage. They are malignant, but respond to chemotherapy and radiation therapy with an 80% 5-year survival rate for patients with higher stage or recurrent disease. Most tumors recur within the first 2 years, but occasionally recurrence is late, even beyond 10 years. The tumor cells resemble primordial germ cells and are arranged in a predominantly diffuse or alveolar or insular pattern separated by thin to broad collagen bands infiltrated by mature lymphocytes. More than 80% of dysgerminomas show chromosome 12p abnormalities, either as i(12p) or 12p overrepresentation. Approximately one-third have *C-KIT* mutations.

Yolk sac tumors comprise about 20% of primitive germ cell tumors of the ovary (Young 2022). They occur most frequently in childhood and adolescence (mean age, 19 years). Rarely, *somatic* yolk sac tumors may be associated with endometrioid, serous, or mucinous carcinomas or carcinosarcomas in postmenopausal patients. Serum alpha fetoprotein level is almost always elevated preoperatively. This is a rapidly growing, highly malignant neoplasm, and evidence of extraovarian spread is present in approximately one-third of patients. Response to combination chemotherapy is high. The prognosis is poor when somatic yolk sac tumors are associated with an epithelial ovarian carcinoma. The tumor is composed of primitive tumor cells with clear cytoplasm (due to glycogen content and, occasionally, lipid content) and hyperchromatic, irregularly shaped large nuclei arranged in reticular, microcystic or macrocystic patterns. Schiller-Duval bodies may be present in up to 75% of cases.

C. Miscellaneous Tumors

A variety of miscellaneous tumors arise in the ovary. Most notable types are small cell carcinoma, hypercalcemic type and tumors of probable Wolffian origin.

Small cell carcinoma, hypercalcemic type occurs in young females between 15 and 30 years, with a peak in the early 20s (Tischkowitz 2020). Approximately two-thirds of the tumors are associated with paraendocrine hypercalcemia. Small cell carcinomas are almost always unilateral, although involvement of the opposite ovary may be seen as part of the abdominal spread encountered at laparotomy in approximately a third of the cases. These are aggressive neoplasms with a poor prognosis, and the majority of patients die of their disease, usually within 2 years. They are composed of diffuse sheets of small, closely packed, round to occasionally spindle-shaped cells with scanty cytoplasm. Follicle-like structures lined by tumor cells are present in 80% of cases. These spaces typically contain eosinophilic, but occasionally basophilic, fluid. In 40% of tumors, a variable proportion of large cells have abundant eosinophilic cytoplasm. These tumors are associated with inactivating mutations of *SMARCA4.*

Tumors of probable Wolffian origin typically arise in the broad ligament, but may arise in the ovary (Shalaby 2020). They are composed of tumor cells that grow diffusely or form closely packed solid or hollow tubules. A sieve-like appearance is often present. The cysts contain eosinophilic luminal secretions. The tumor cells are oval or spindle shaped, and they have scanty eosinophilic cytoplasm or pale cytoplasm in solid tubular areas. They most often resemble endometroid tumors of the ovary and are often mistaken for them. Most are benign, but occasional cases metastasize.

D. Metastases

Metastatic tumors to the ovary are common and may be misinterpreted as primary ovarian carcinomas, particularly if they arise in the gastrointestinal tract (Zhang 2020). Gastrointestinal tract primary carcinomas can exhibit features similar to primary endometrioid and mucinous adenocarcinomas and it can be difficult to distinguish them. Breast carcinoma may also metastasize to the ovaries; this can be particularly problematic in patients with *BRACA1*/*BRCA2* germline mutations.

In summary, ovarian carcinoma is not a single disease or even a single set of multiple diseases. The vast majority are epithelial "ovarian" cancers, but this group of tumors is composed of multiple tumor types, each with a different clinical presentation, different histopathology, different molecular pathogenesis, different disease course, and different response to various types of chemotherapy. The non-epithelial ovarian malignant tumors are similarly diverse, and there are several types of miscellaneous tumors that arise independent of both the epithelial and non-epithelial tumors. Moreover, the frequent occurrence of metastases to the ovaries and their misinterpretation as primary ovarian cancer that has historically clouded the classification of ovarian cancer continues to pose diagnostic and therapeutic difficulties to this day. Given this vast array of cancers that can occur in the ovary, it is inconceivable that any single endogenous or exogenous factor or factors can be attributed to their diverse etiologies.

III. TALC AND OVARIAN CANCER

Foreign material, however inert, will evoke a response in human tissue. The initial response can be associated with acute inflammation, involving local macrophages and mast cells, and may evolve into a foreign body reaction, with formation of multinucleated foreign body giant cells and granulomas that function to wall off the foreign material from the surrounding tissue. Talc is known to elicit a foreign body reaction in human tissue (Clement 2019; Shah 2017; Irving 2015; Reichert 2012; de Brito 1994; Mostafa 1985; Perou 1973). This host response to talc is exploited in talc pleurodesis, a common FDA-approved procedure for treatment of benign and malignant pleural effusions, as well as pneumothorax. Talc is currently considered the most effective sclerosant available for pleurodesis.

There is no correlation between the presence of talc and ovarian carcinoma. Although the early literature hypothesized a possible role of talc in the development of ovarian cancer (e.g., Cramer 1982; Henderson 1971, 1979), subsequent accumulated data from human and animal studies have not substantiated this link (e.g., O'Brien 2020; Taher 2019; Berge 2018; Penninkilampi 2018; Visvanathan 2018; Gonzalez 2016; Houghton 2014; Terry 2013; Gates 2010; Keskin 2009; Cramer 2007; Gertig 2000; Heller 1996; Boorman 1995). Studies reporting talc

particles in cancerous and non-cancerous tissue have been cited in support of this hypothesis; however, talc (like other small mineral particulates) is relatively ubiquitous, especially in the medical profession (Heller 1996; Henderson 1971, 1979; McDonald Mar 2019; McDonald Oct 2019; Campion 2018). Talc particles identified in excised patient tissues without associated foreign body reactions are more likely than not the result of post-surgical contamination from tissue processing; such findings cannot be reliably linked to the pathogenesis of an individual patient's ovarian cancer. Indeed, if talc-related inflammation was an inciting factor in the subsequent development of ovarian HGSC, one would expect to see talc-related foreign body responses associated with the early HGSC precursor lesions (STIC) (Clement 2019; Reichert 2012; Perou 1973). This is not seen. Nor are these early STIC lesions (with the exception of intratumoral lymphocytes) associated with inflammation or with reported talc use (Malmberg 2016; Visvanathan 2018).

Current evidence does not support chronic inflammation as a cause of ovarian cancer. HGSC, the most common type of ovarian cancer, is associated with STIC precursor lesions. STIC exhibits similar histologic features to that of HGSC. Both tumors may show papillary, solid, so-called pseudoendometrioid and transitional morphology. Cytological atypia is marked. Intratumoral lymphocytes may be present and can be numerous. However, there is almost never an associated chronic inflammatory process. No significant correlation has been demonstrated between HGSC and the histologic presence of chronic inflammation or chronic tubal injury (Malmberg 2016). Further, pelvic inflammatory disease, an inflammatory condition that affects the fallopian tubes and ovaries, is associated with gross and microscopic evidence of chronic inflammation and fallopian tube injury but is not reliably associated with the development of ovarian cancer (e.g., Huang 2021; Rasmussen 2017; Zhou 2017; Shen 2016). Inflammation has not been shown to be a driver of HGSC. Likewise, inflammation has not been shown to be a driver in the development of endometrioid or clear cell ovarian cancers, the next most common subtypes. Endometrioid and clear cell carcinoma are highly associated with endometriosis. Endometriosis is a multifactorial disease, and recent epidemiologic evidence suggests factors other than inflammation contribute to the development of endometriosis-associated ovarian cancers. (Huang 2021). Unlike most chronic inflammatory conditions, endometriosis-associated inflammation is hormonally driven. Defects in steroid hormone signaling contribute to the growth and survival of endometriotic tissue and these likely play a role in malignant transformation. (Bulun 2019). Several studies have demonstrated the presence of known cancer-driver mutations in uterine endometrium (*KRAS, PIK3CA, ARID1A*) that are also found in endometriotic lesions and endometriosis-associated ovarian cancers, and these likely play a role in the development of endometriosis and in ovarian cancer. (Bulun 2019). There is also some evidence to suggest that some women may have an inherited predisposition to endometriosis. (Bulun 2019). Although pelvic inflammatory disease has been tendered as a possible risk factor in ovarian cancer, the cumulative incidence rate of ovarian cancer is in fact significantly higher in patients with endometriosis than in those with pelvic inflammatory disease ($p < 0.001$) (Huang 2021).

Talc foreign body reactions are not associated with chronic, tissue destroying inflammation. Some chronic inflammatory conditions may be associated with risk for developing cancer. Inflammatory bowel disease (e.g., ulcerative colitis) and the development of colon cancer is one such example. Another example is that of squamous cell carcinoma arising in a chronic skin wound. Despite underlying differences in the etiology of the chronic inflammation, *each at its core is associated with histological evidence of long-term, chronic inflammation with tissue*

destruction. Talc foreign body reactions and granulomas are not associated with this type of chronic, tissue-destroying inflammation and have not been associated with an increased risk of cancer (Shah 2017; Hunt 2007; de Brito 1994).

Talc particles reported in human tissue, in the absence of biological reaction, are likely lab contaminant. Reported general findings of "birefringent" particles in tissue are irrelevant if the particles are not in the plane of section of the tissue involved by tumor, within macrophages or other cells, and/or if there is no associated inflammation or foreign body reaction in the areas or tissues in which the particles are located. Of note, many of the aggregates of birefringent material depicted in publications are sufficiently large that they would not be present in vivo without an associated foreign body response. In the absence of this expected response, one can only reasonably conclude that this material is contaminate introduced during or after surgery. If talc were present in tissue prior to resection and processing, smaller particles would be expected to be seen within macrophages, while larger particles would be expected to elicit a foreign body giant cell reaction – neither of which is demonstrated in publications. Moreover, claims in publications concerning talc in tissues of purported talc users (including some users who develop ovarian cancer) have not validated their claims with histopathologic evidence of exposure, and such findings are not consistent with my substantial experience as a gynecological pathologist and my examinations of thousands of tissue specimens from women with gynecologic cancers, including ovarian cancer.

Although publications recognize that "talc contamination of the surface of surgical pathology specimens is common," (McDonald Mar 2019), these publications fail to recognize that laboratory processing of tissue specimens for histology can not only introduce contaminants on the surface of the specimen, but also deep within tissue (Heller 1996; McDonald Mar 2019). No published literature reports methods to adequately control for the tissue processing following surgery, making histopathologic correlation critical to support claims of biologic exposure. There are multiple steps in tissue processing following surgery that may (and often do) introduce particulate contaminate into the tissue. The fixation and processing of pathology specimens can result in introduction of foreign particulate throughout the specimen and not just on the surface of the tissue. The experienced diagnostic pathologist is well aware of the potential introduction of such material during tissue processing and refrains from issuing a diagnostic opinion in the absence of corroborating evidence of an associated cellular (i.e., presence of particulate material within macrophages with clear displacement of the macrophage cytoplasm) or foreign body reaction.

Migration studies that claim to demonstrate that talc migrates from the perineum are not compelling. To date, virtually all studies in humans have been based on the introduction of various materials directly into the vagina, cervical os, and/or uterus, and not on perineal exposure alone (e.g., De Boer 1972; Egli 1961; Iturralde 1981; Kunz 1996; McCalley 1985; Sjosten 2004; Ventner 1979). Aside from their questionable relevance to an individual's use of perineal talc, these studies do not control for effects of body positioning (e.g., Trendelenberg), endogenous or exogenous exposure to oxytocin, anesthesia, or surgery (De Boer 1972; Egli 1961; Iturralde 1981; Kunz 1996; Kunz 2007; McCalley 1985; Ventner 1979). Similarly, studies that specifically utilize inert carbon particles do not control for random exposure to environmental carbon particles (Egli 1961; Wehner 1985). Also, animal studies, which are difficult to extrapolate to humans, have yielded conflicting results (Edelstam 1987; Keskin 2009; Phillips 1978; Thompson 2061). No study has provided conclusive evidence that talc, when applied to the perineum of the human female can penetrate the

cervical barrier and "migrate" to the fallopian tube and peritoneum in the absence of deliberate manipulation.

There is also no compelling scientific evidence that talc particles in tissue cause "ovarian" cancer. Studies reporting gene-talc interactions, immune-talc interactions, and interactions between talc and the oxidative system are largely correlative and have not been independently substantiated as bona fide mechanisms of ovarian carcinogenesis (Gates 2008; Fletcher Mar 2018; Saed 2017). The examination of cancerous and non-cancerous tissues from a patient with ovarian carcinoma with scanning electron microscopy and energy dispersive X-ray analyses is also not a sufficiently scientific or appropriate methodology for demonstrating a causal link between the presence of talc and/or asbestos and the development of the patient's ovarian cancer (McDonald Mar 2019; McDonald Oct 2019; McDonald Nov 2019). At a minimum, a histologic response (e.g., foreign body reaction) in association with the presence of birefringent particles or the presence of particulate material within macrophages with clear displacement of the macrophage cytoplasm should be present to confirm actual exposure and to exclude artifact (e.g., Clement 2019; Reichert 2012; Perou 1973). In absence of this response, it is more likely than not that the particles are processing contaminants or "innocent bystanders." Even in the presence of the expected histologic response, a convincing link between the presence of a foreign particle and carcinogenesis cannot be established using this methodology.

In summary, there is no scientific support to the claim that talc causes the varied and distinct diseases that are broadly referred to as "ovarian" cancer. Ovarian carcinoma is not a single disease. Although the majority are epithelial "ovarian" cancers, this diverse group of tumors is composed of multiple tumor types, each with a distinct clinical presentation, pathology, and molecular pathogenesis. No scientific study has linked talc exposure to the specific genetic alterations associated with development of all these different tumors and it is implausible that perineal exposure to talc provides a biologic mechanism for the development of these distinct diseases.

IV. CASE FINDINGS

In preparing my case-specific report, I reviewed the relevant medical records (e.g., operative, surgical pathology, and genetic testing reports) and available H&E stained slides from Tamara Newsome's [redacted] In brief, Tamara Newsome is an African American, [redacted], with prior history of [redacted]. At the time of her diagnosis of ovarian endometrioid carcinoma she was 53 years of age. There is [redacted] The 31 H&E stained slides from her surgical procedure, which represent recuts prepared by Holy Cross Hospital, Silver Springs MD demonstrate low-grade endometrioid carcinoma (FIGO grade 1) involving the right ovary (Figure 1) and uterine serosa (Figure 2) (slides A4, A5, and A8) (FIGO stage IIA). The left ovary, right and left fallopian tubes, and omentum are uninvolved. No lymph node tissue is identified in the specimen designated as right pelvic lymph node. The carcinoma is associated with endometriosis (Figures 3 and 4) (slide A8) as well atypical endometriosis (Figures 5-7) (slides A13 and A15). Immunohistochemical stains performed on unstained slides labeled A8 in the CLIA laboratory at Stanford demonstrate the tumor cells are positive for PAX-8 (Figure 8) and cytokeratin 7 (Figure 9), but not cytokeratin

20 (Figure 10), which is compatible with ovarian endometrioid cancer (and not compatible with metastatic colorectal cancer). The tumor cells further demonstrate loss of MSH6, but not MSH2 or PMS2. CD10 highlights the stroma around the endometriotic gland (Figure 11). In addition, sections of the uterus demonstrate deep adenomyosis (Figure 12) (slides A6 and A7), cellular leiomyoma (slide A5), and benign, inactive endometrium. A *MUTYH* mutation of uncertain significance was identified on myRisk panel through Myriad.

Birefringent material is present in the slides reviewed. However, the absence of associated foreign body reaction (or even presence of particles in macrophages) identifies this material as artifact, most likely from the processing of the tissue for histology.[1] There is no chronic inflammation associated with the cancer.

V. RESPONSE TO PLAINTIFF'S EXPERT

Plaintiff's pathology expert, Dr. Godleski, asserts that there is "birefringent foreign material" in 8 of the 31 slides he reviewed. The composition of this material is unknown, as it was not subjected to further analysis by Dr. Godleski. The lower two photos of Figure 1 of his report include pictures purporting to show such birefringent material in "dense collagenous stroma" and "densely cellular ovarian stroma" in areas not involved by tumor. Although he states these particles are within the plane of focus, it appears that that they are overlying the tissue and not within it as he asserts. The particles are not within cells and there is no associated inflammation in these areas.

Additional photos of birefringent material were produced separate from Dr. Godleski's expert report and were also reviewed. In many of the provided pictures, it is not clear that the observed birefringent material is in the same plane of section as the tissue. There is no associated foreign body reaction in Dr. Godleski's photographs and no definitive evidence of particulate in macrophages (Godleski Report, Figure 1, and additional photomicrographs produced by Plaintiff). In addition, many of the aggregates of birefringent material depicted by Plaintiff's expert are sufficiently large that they would not be present in vivo without an associated foreign body response. As noted above, if talc were present in tissue prior to resection and processing, smaller particles would be expected to be seen within macrophages, while larger particles would be expected to elicit a foreign body giant cell reaction – neither of which is demonstrated.

Although Dr. Godleski recognizes that "talc contamination of the surface of surgical pathology specimens is common" (McDonald Mar 2019), he fails to recognize that laboratory processing of tissue specimens for histology can not only introduce contaminants on the surface of the specimen, but also deep within tissue. Despite the report's arduous description of attempts to exclude the possibility of talc contaminant, Dr. Godleski did not control for the tissue processing following surgery. There are multiple steps in tissue processing following surgery that may (and often do) introduce particulate contaminate into the tissue. The fixation and processing of pathology specimens can result in introduction of contaminants throughout the specimen and not just on the surface of the tissue. The experienced diagnostic pathologist is well aware of these potential contaminants and refrains from issuing a diagnostic opinion in the absence of associated foreign

[1] To the extent asbestos is alleged to be a contaminant of talcum powder, I saw no evidence of ferruginous bodies in the available tissue to support exposure. Also, the reported association between asbestos exposure and ovarian cancer has been questioned (Slomovitz 2020; Reid 2011).

body reactions. I found no foreign body reactions supportive of talc exposure in the available slides and no evidence of particulate in macrophages.

Dr. Godleski also opines that "it can be stated to a reasonable degree of medical certainty, that the talc and tremolite asbestos found in the tissues of this case are contributory evidence for a causal link between the presence these materials and the development of this patient's ovarian cancer." (Godleski Report, 7). Examination of cancerous and non-cancerous tissues from a patient with endometrioid carcinoma with scanning electron microscopy and energy dispersive X-ray analyses is not a sufficiently scientific or appropriate methodology for demonstrating a causal link between the presence of talc and/or asbestos and the development of the patient's ovarian cancer. At a minimum, a histologic response (e.g., foreign body reaction) in association with the presence of birefringent particles or the presence of particulate material within macrophages with clear displacement of the macrophage cytoplasm should be present to confirm actual exposure and to exclude artifact (e.g., Clement 2019, Reichert 2012; Perou 1973). In absence of this response, it is more likely than not that the particles are a contaminant or "innocent bystander". Even in the presence of this histologic response, a convincing link between the presence of a foreign particle and carcinogenesis cannot be established using this methodology.

VI. SUMMARY OPINIONS

There is no reliable scientific basis to conclude that talc (or any component of talcum powder) is an etiologic factor in the pathogenesis of ovarian cancer. Although several studies have reported finding talc in ovarian tissue using light microscopy and ultrastructural analysis, none has validated their claims of exposure with the known and expected histopathologic findings associated with talc. Without histopathologic correlation, laboratory contamination/artifact cannot be excluded, and this is the most likely explanation for the reported findings. Further, examination of cancerous and non-cancerous tissues from a patient with endometrioid carcinoma with scanning electron microscopy and energy dispersive X-ray analyses is not a sufficiently scientifically appropriate methodology to demonstrate a causal link between the presence of talc and the development of the patient's ovarian cancer. The evolution of the talc-ovarian cancer hypothesis is highly reminiscent of the evolution of the (historically incorrect) hypothesis that herpes simplex virus (HSV-2), a venereal transmitted virus, was causally associated with cervical cancer. This theory was advanced largely on the basis of seroepidemiological findings (higher prevalence of HSV-2 antibodies among cancers than controls), documented HSV infection and electron microscopic evidence of viral particles in tumor tissue (Kessler 1974; Nishiura 1983; Smith 1983). Yet, extensive epidemiologic, histologic, molecular, and microviral data now demonstrate that human papilloma virus (HPV) is the causative agent for cervical cancer; this knowledge is the basis for the current HPV vaccine (Vonsky 2019). The presence of talc in tissue removed from an individual ovarian cancer patient cannot be accepted as evidence of causality *per se*. Moreover, given the vast array of cancers that can occur in the ovary, it is inconceivable that any single endogenous or exogenous factor such as talc can be attributed to their diverse etiologies.

The presence of endometriosis in tissue adjacent to Tamara Newsome's low-grade endometrioid ovarian cancer, as well as foci of atypical endometriosis that merge with the carcinoma, the additional presence of mismatch repair protein deficiency in the tumor cells and uterine adenomyosis, as well as her relatively young age at diagnosis (53 years) provide compelling

evidence that this ovarian cancer arose from endometriosis. As stated earlier in the general section of my report, endometriosis is a well-recognized precursor of ovarian endometrioid carcinoma.

Figures

Figure 1. Low-grade endometrioid adenocarcinoma (FIGO grade 1) involving right ovary (100x).

Figure 2. Low-grade endometrioid adenocarcinoma (FIGO grade 1) involving uterine serosa (100x).

Figure 3. Low-grade endometrioid adenocarcinoma (top) arising in right ovary associated with endometriosis (bottom left) (20x).

Figure 4. Higher magnification of endometriotic gland depicted in Figure 3 (200x).

Figure 5. Atypical endometriosis (bottom left) associated with low-grade endometrioid adenocarcinoma (top right) in right ovary (100x).

Figure 6. Higher magnification of atypical endometriosis depicted in Figure 5. The glands are complex and the epithelium is atypical (200x).

Figure 7. Another focus of atypical endometriosis exhibits cytologic atypia only (200x).

Figure 8. The adenocarcinoma exhibits strong nuclear expression for PAX-8, which is a marker for mullerian (not colorectal) differentiation (200x).

Figure 9. The adenocarcinoma also exhibits strong expression for CK7, which is also typical for mullerian differentiation (200x).

Figure 10. The adenocarcinoma is negative for CK20, which is also typical for mullerian differentiation (200x). CK20 is typically positive in colorectal adenocarcinoma.

Figure 11. CD10 highlights the stroma around the endometriotic gland depicted in Figure 4 (200x).

Figure 12. Extensive adenomyosis is present in the uterus (20x).

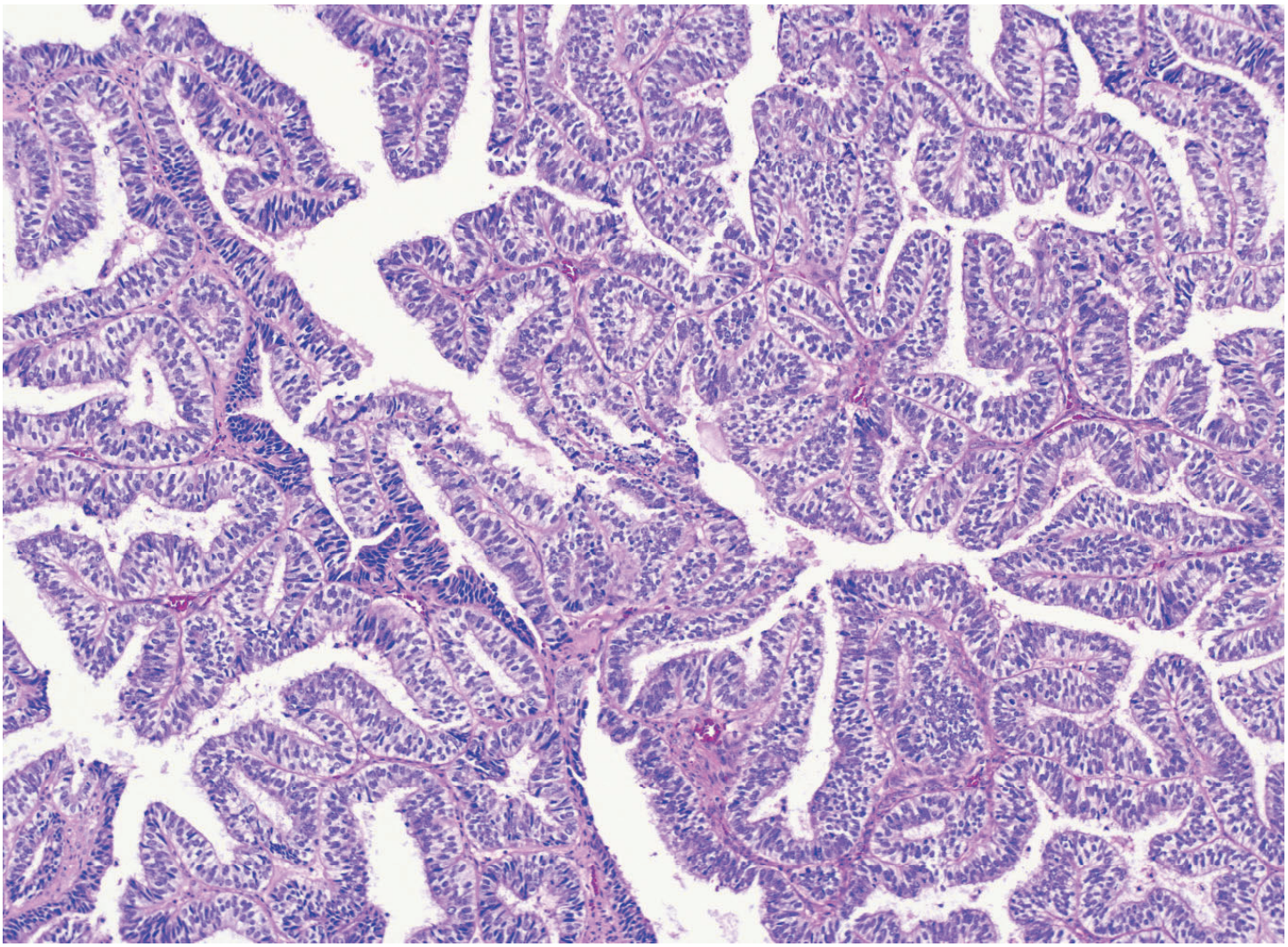

Figure 1. Low-grade endometrioid adenocarcinoma (FIGO grade 1) involving right ovary (100x).

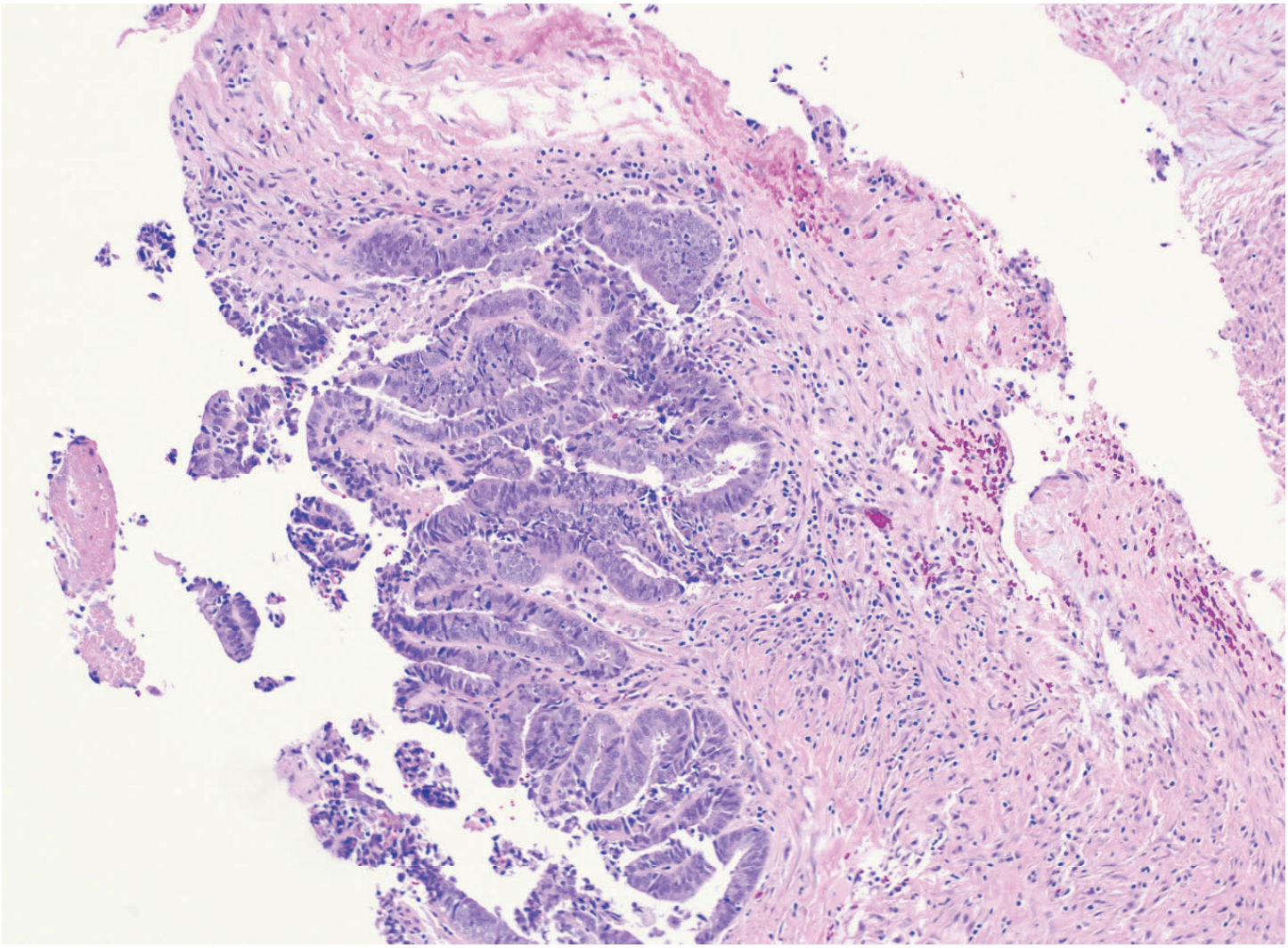

Figure 2. Low-grade endometrioid adenocarcinoma (FIGO grade 1) involving uterine serosa (100x).

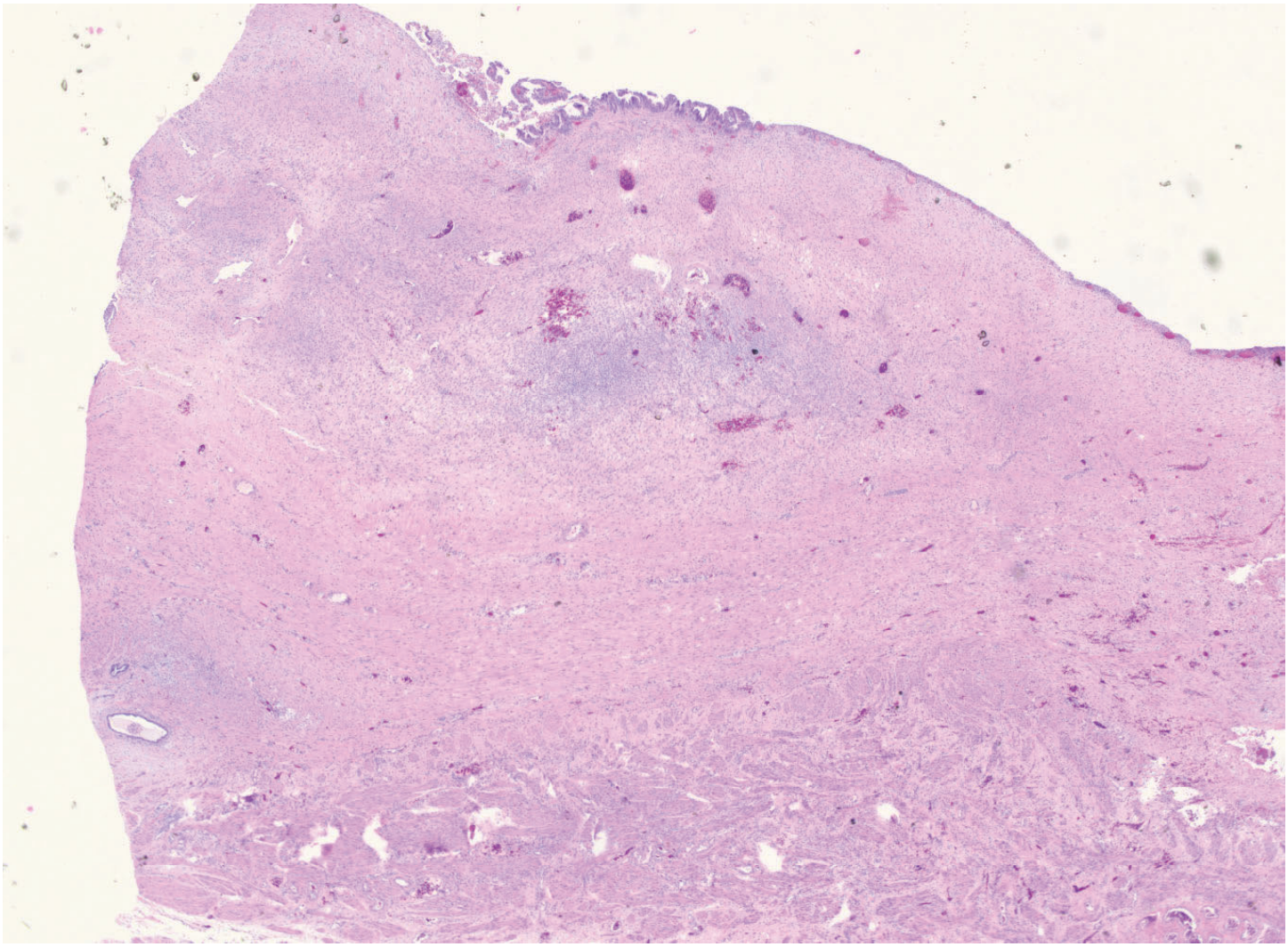

Figure 3. Low-grade endometrioid adenocarcinoma (top) arising in right ovary associated with endometriosis (bottom left) (20x).

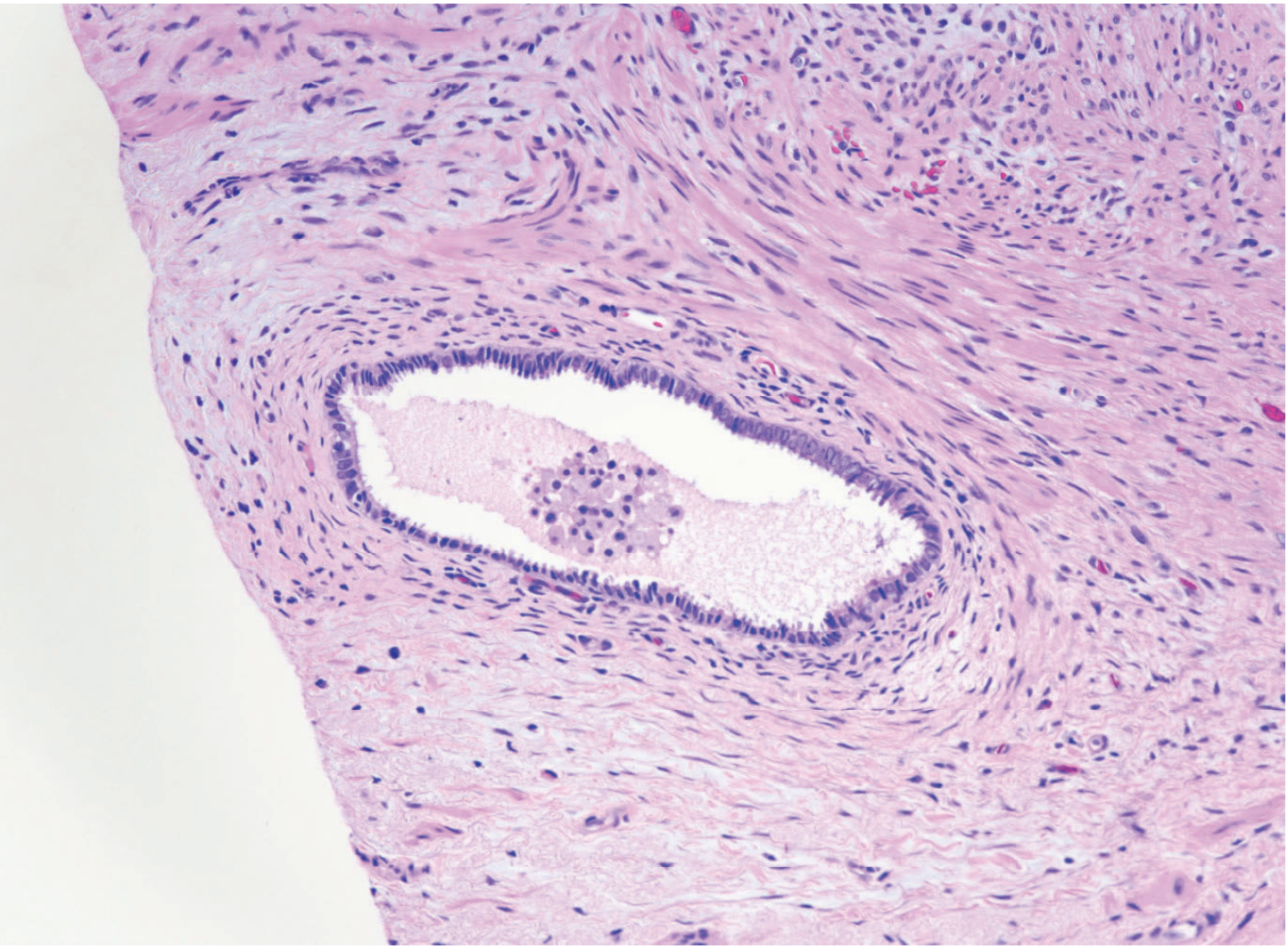

Figure 4. Higher magnification of endometriotic gland depicted in Figure 3 (200x).

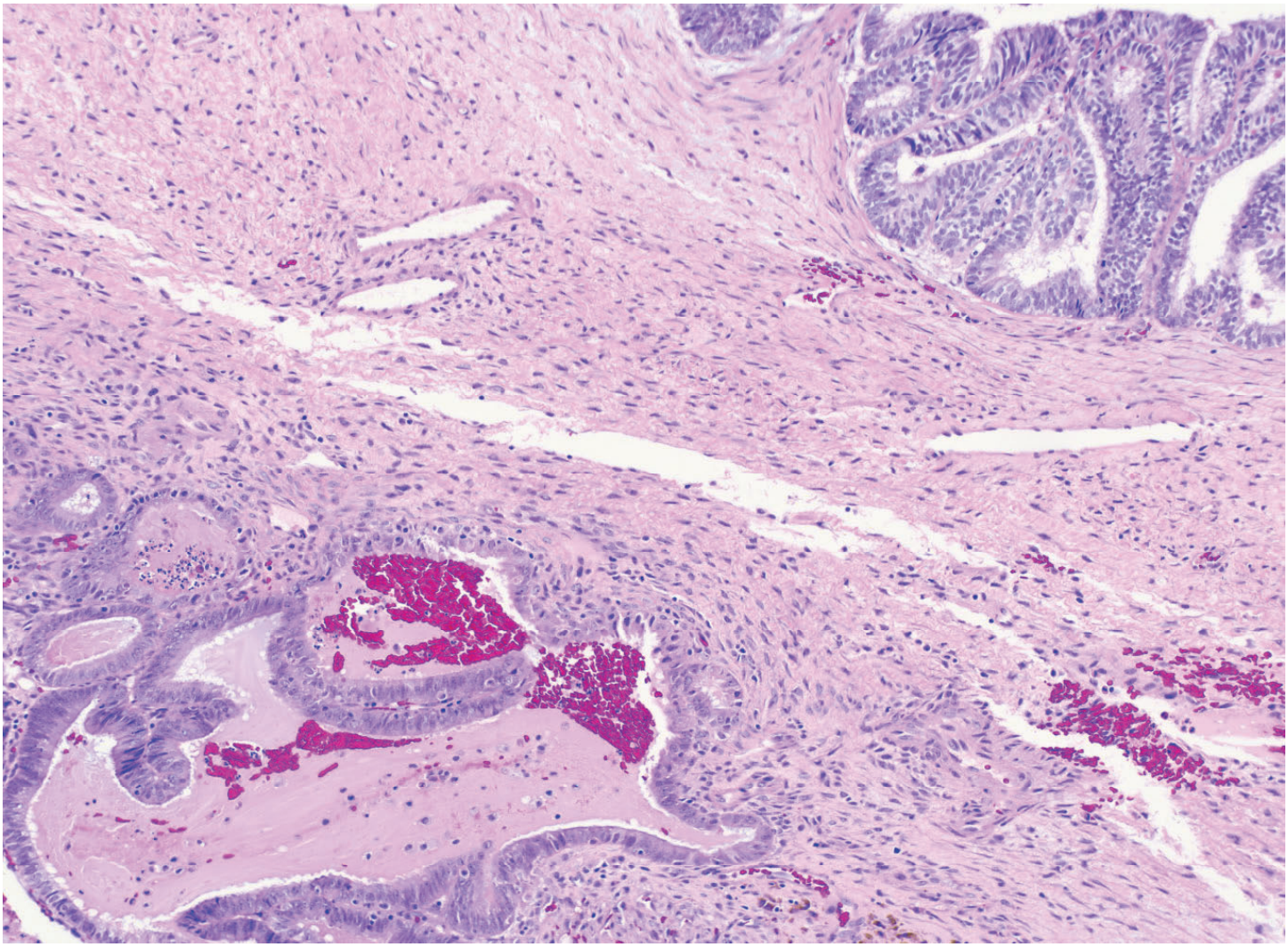

Figure 5. Atypical endometriosis (bottom left) associated with low-grade endometrioid adenocarcinoma (top right) in right ovary (100x).

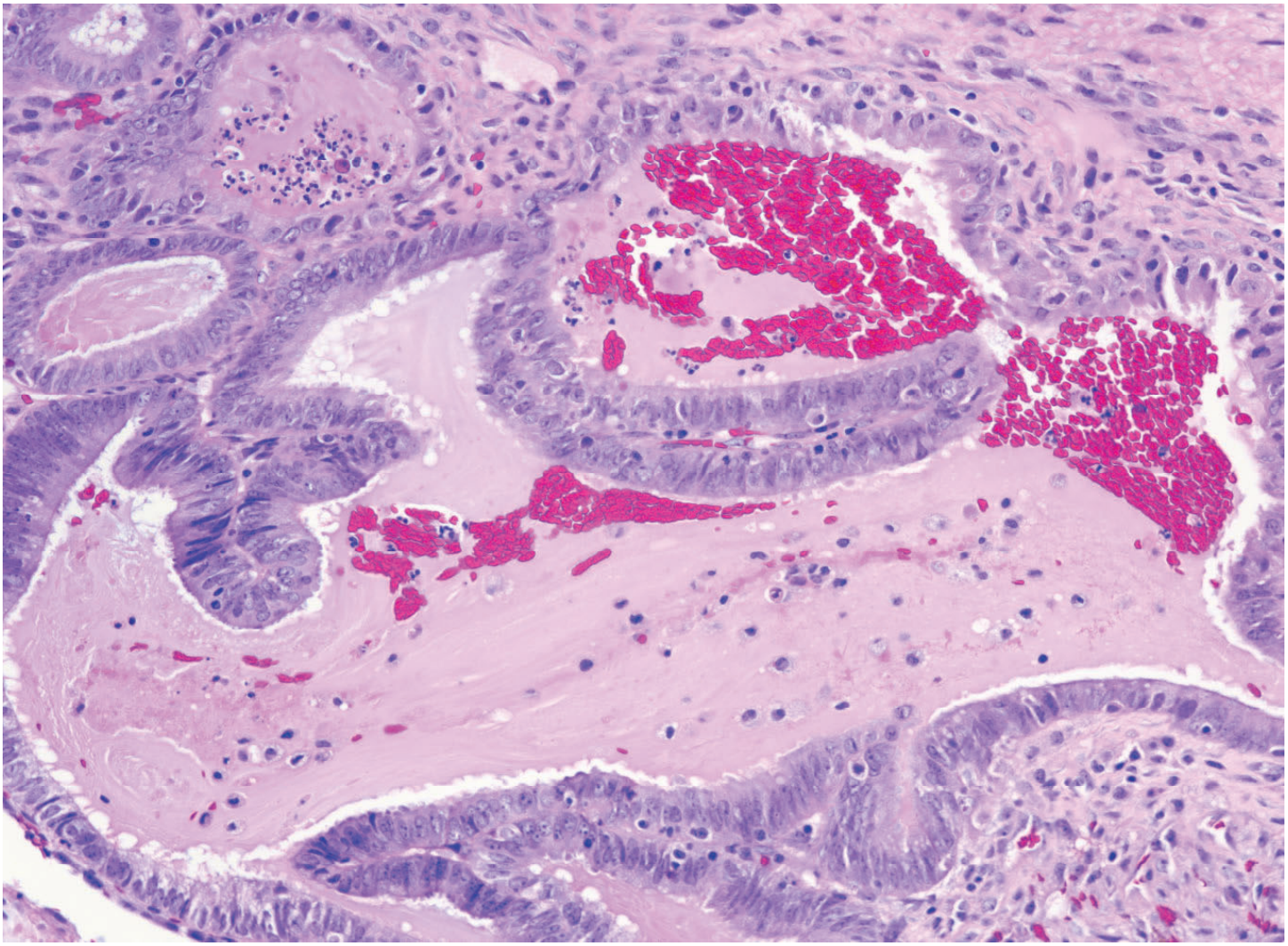

Figure 6. Higher magnification of atypical endometriosis depicted in Figure 5. The glands are complex and the epithelium is atypical (200x).

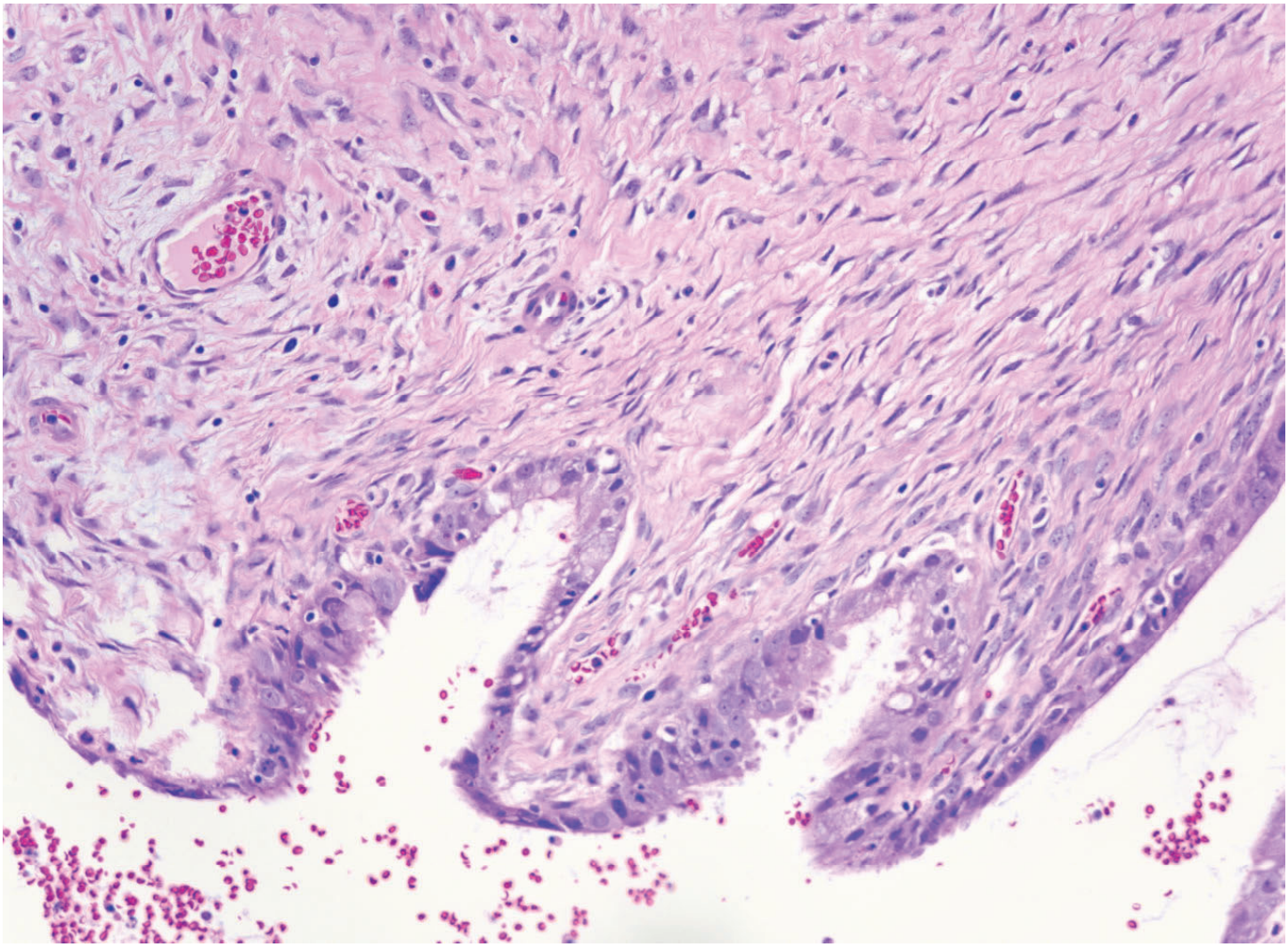

Figure 7. Another focus of atypical endometriosis exhibits cytologic atypia only (200x).

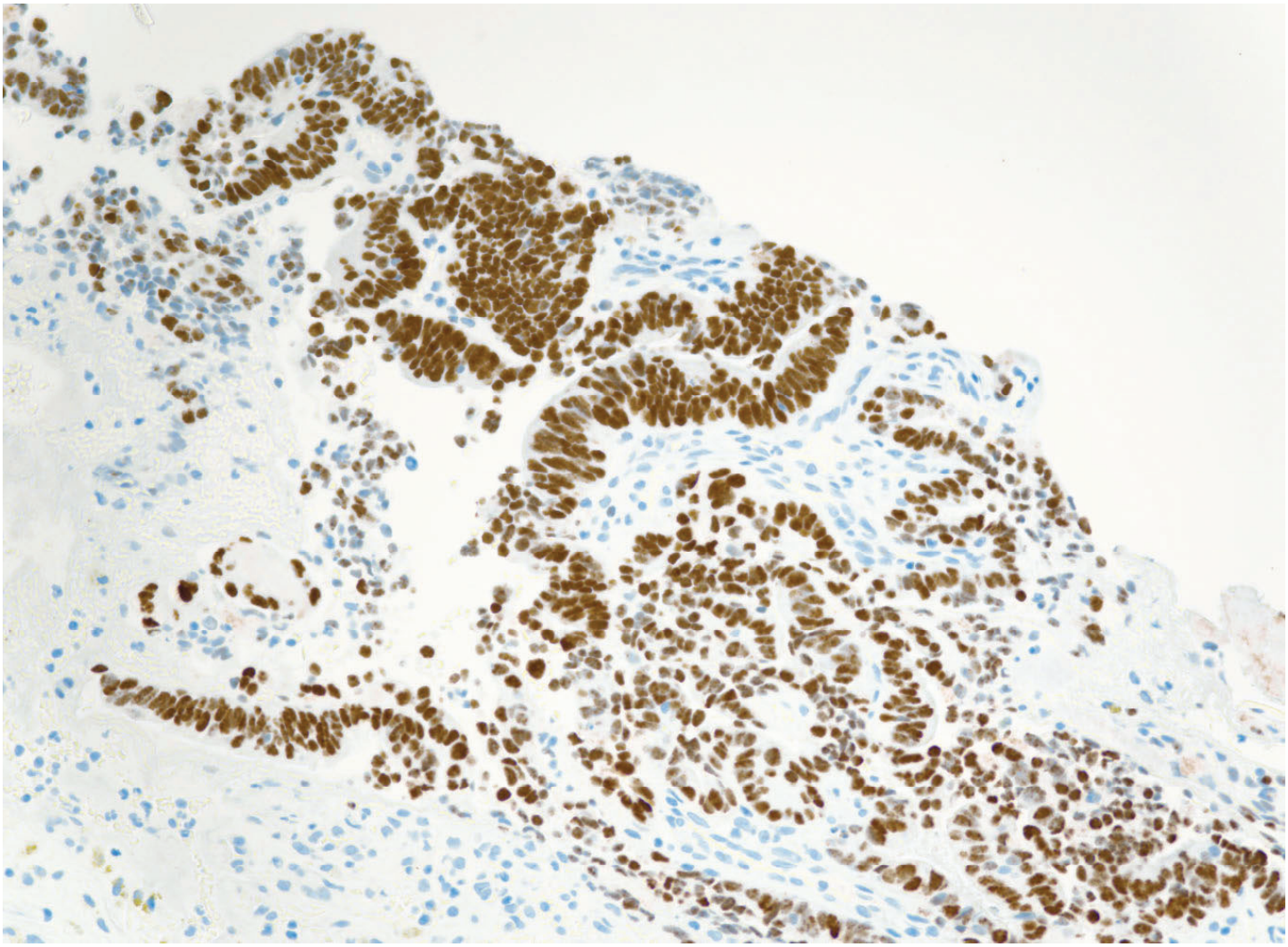

Figure 8. The adenocarcinoma exhibits strong nuclear expression for PAX-8, which is a marker for mullerian (not colorectal) differentiation (200x).

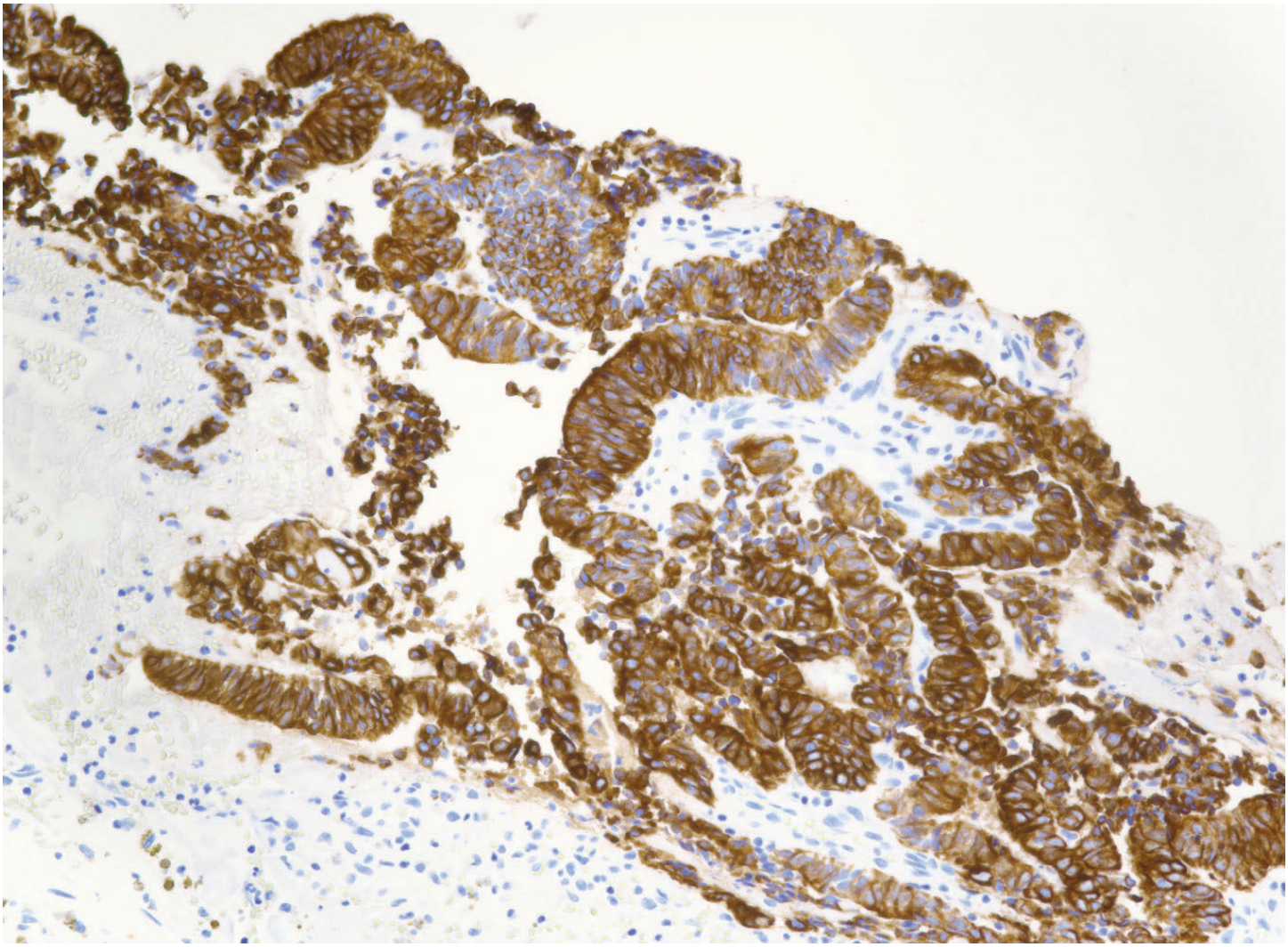

Figure 9. The adenocarcinoma also exhibits strong expression for CK7, which is also typical for mullerian differentiation (200x).

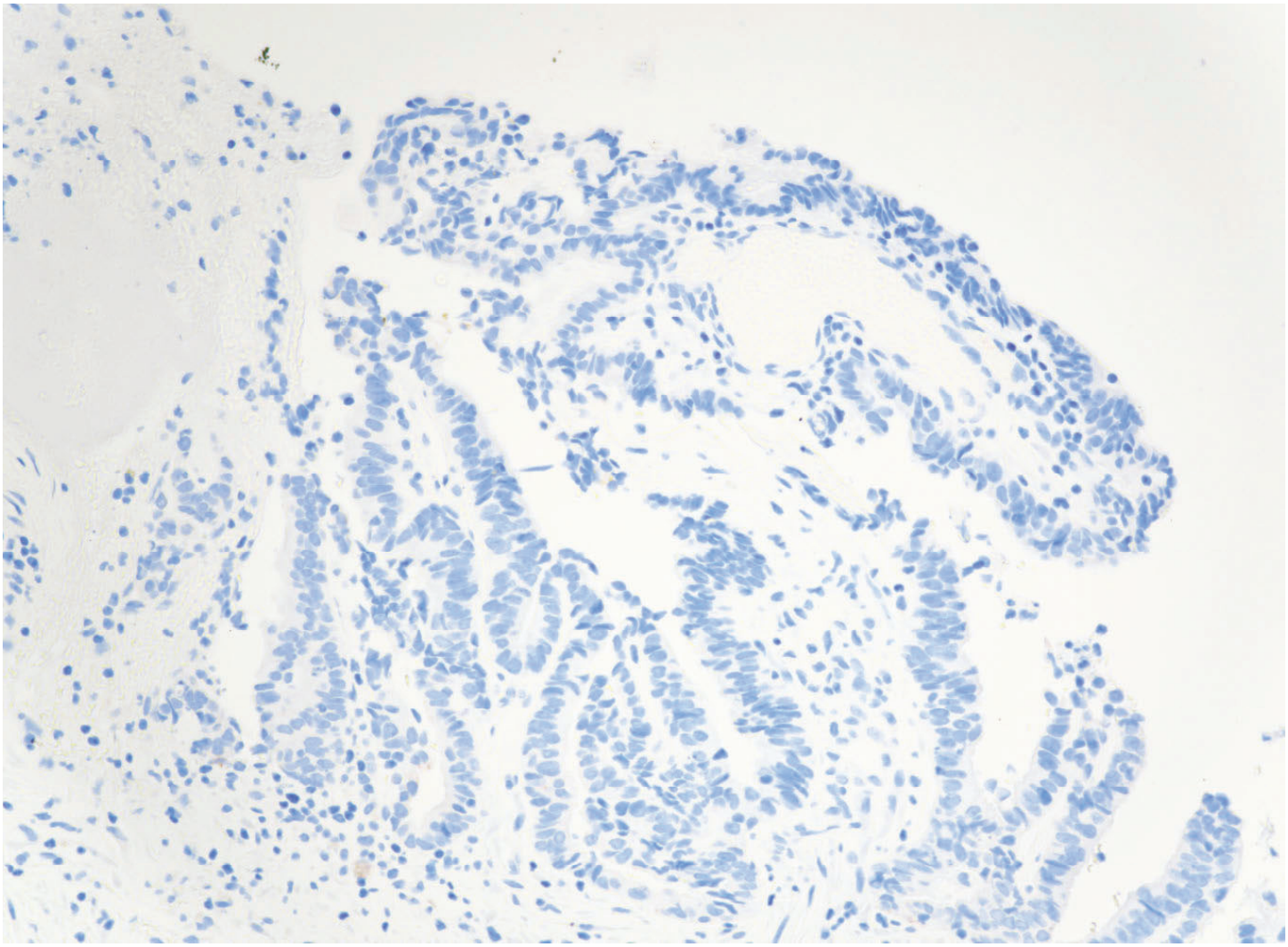

Figure 10. The adenocarcinoma is negative for CK20, which is also typical for mullerian differentiation (200x). CK20 is typically positive in colorectal adenocarcinoma.

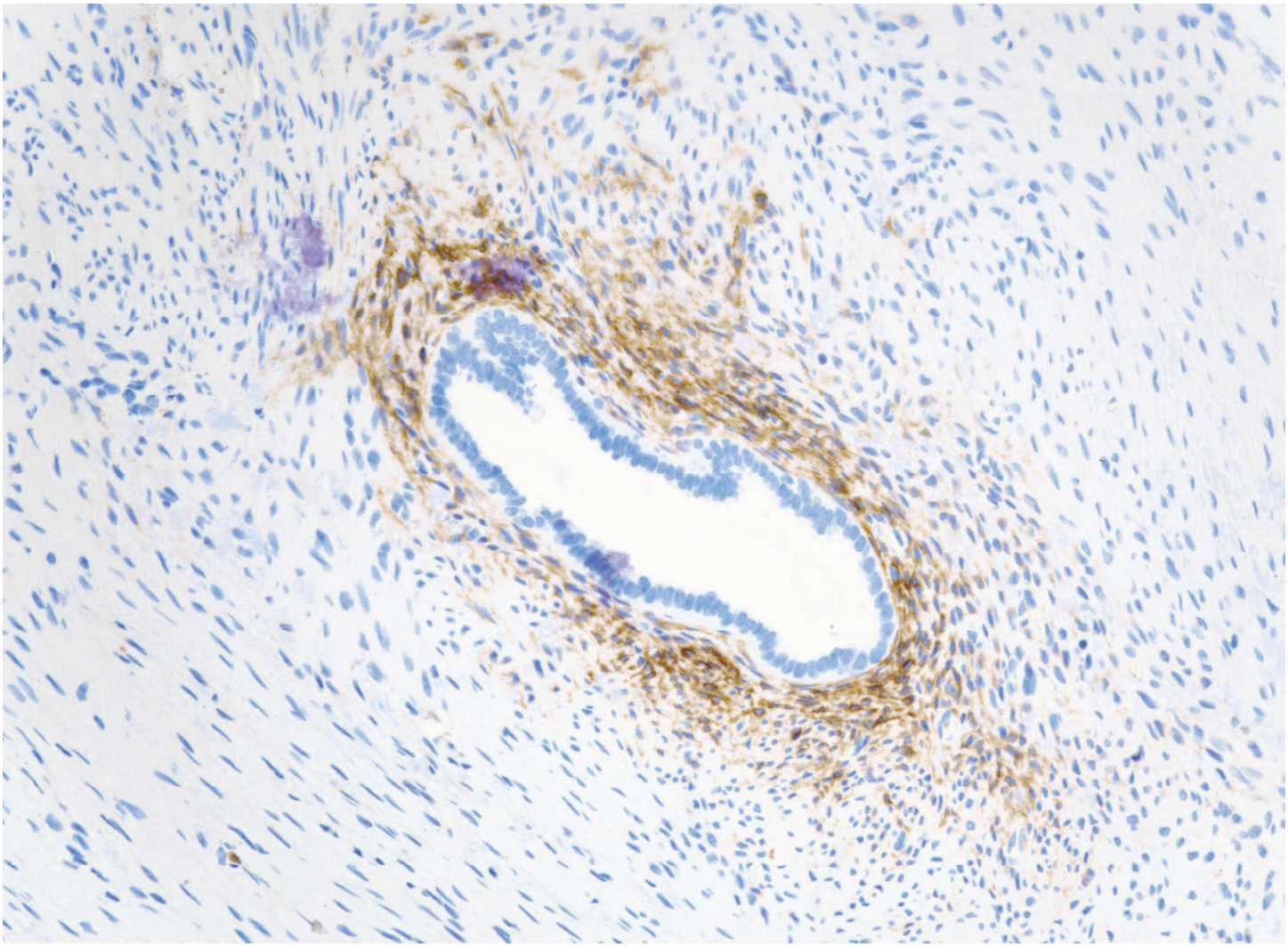

Figure 11. CD10 highlights the stroma around the endometriotic gland depicted in Figure 4 (200x).

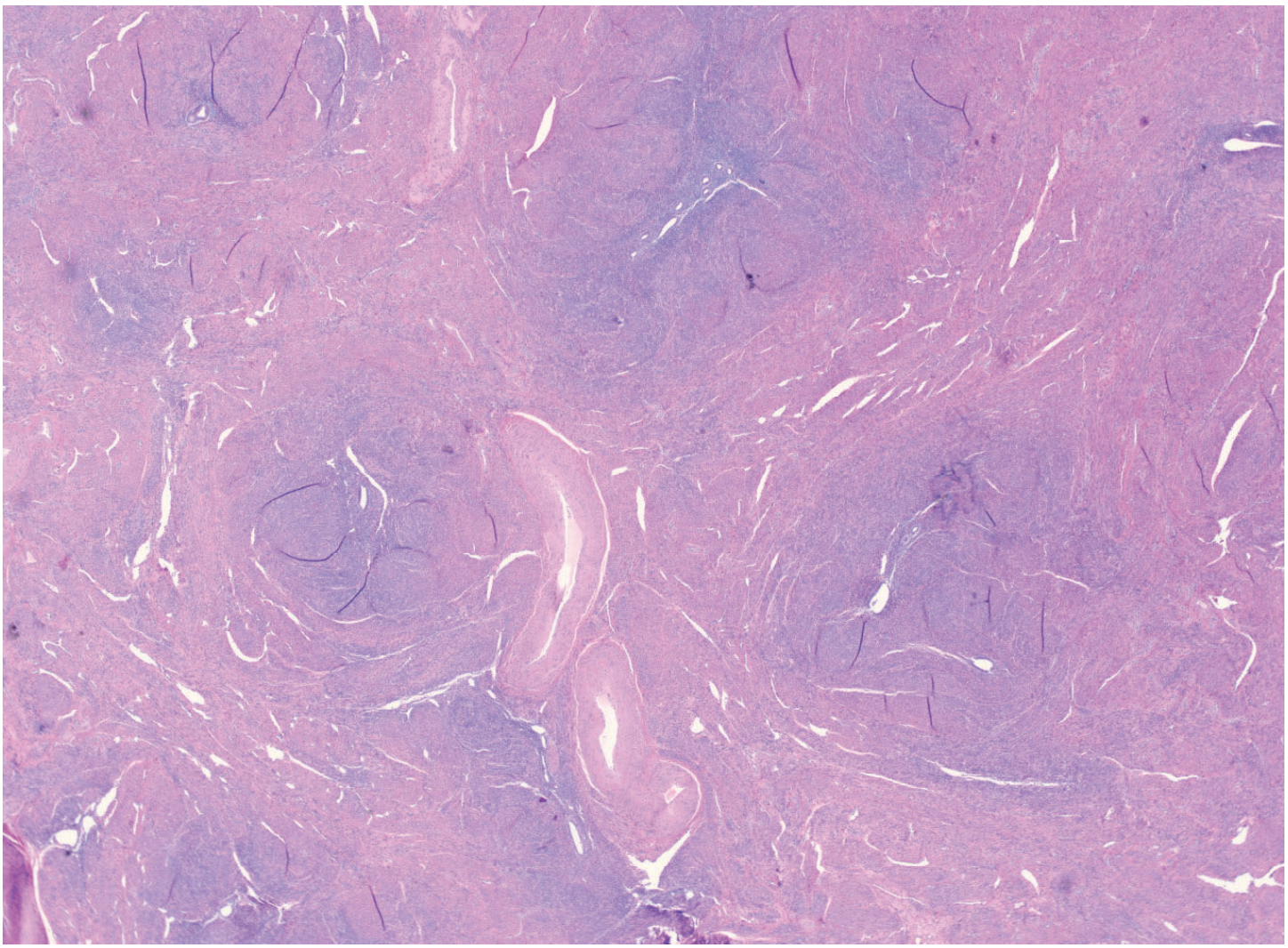

Figure 12. Extensive adenomyosis is present in the uterus (20x).

EXHIBIT A

CURRICULUM VITAE

PERSONAL DATA

Name: **Teri A. Longacre, M.D**.
Place of Birth: Los Angeles, California
Citizenship: U.S.A.
Spouse: Richard H. Hildebrandt, M.D.
Children: Nicole T. Hildebrandt, Jesse I. Hildebrandt, Daniella E. Hildebrandt
E-mail: longacre@stanford.edu
Telephone: 650-498-6460

EDUCATIONAL BACKGROUND

1972-1976	St. John's College, Santa Fe, New Mexico, B.A., Liberal Arts
1976-1980	University of New Mexico, Albuquerque, New Mexico, B.S., Biology
1981-1985	University of New Mexico School of Medicine, Albuquerque, New Mexico, M.D. (Degree awarded in December 1985)

POSTGRADUATE EDUCATION

1980-1981	Research Assistant (S.A. Bartow, M.D.), University of New Mexico School of Medicine, Albuquerque, New Mexico
1983-1984	Post-Sophomore Fellowship in Pathology, University of New Mexico School of Medicine, Albuquerque, New Mexico
1986-1987	Resident in Pathology, University of New Mexico Hospital, Albuquerque, New Mexico
1987-1988	Fellow in Hematopathology, University of New Mexico Hospital, Albuquerque, New Mexico
1988-1989	Fellow in Gastrointestinal Pathology, University of New Mexico Hospital, Albuquerque, New Mexico
1989-1990	Resident in Pathology, University of New Mexico Hospital, Albuquerque, New Mexico
1990-1991	Fellow in Surgical Pathology, Stanford University Hospital, Stanford, California
2004	Leadership Development for Physicians in Academic Health Centers, Harvard School of Public Health, Boston, Massachusetts
2005-2006	Stanford Physician Leadership Development Program, Stanford University School of Medicine, Stanford, California
2010-2011	Breast Prognostic Factors Testing, College of American Pathology, Chicago, Illinois
2017	Relationship-Centered Communication Skills Training Program, Stanford Health Care Communication Program & American Academy on Communication in Healthcare (AACH)

2018	Coach, Advancing Communication Excellence at Stanford (ACES)

ACADEMIC APPOINTMENTS

1991-1993	Clinical Instructor and Staff Physician, Department of Pathology, Stanford University Medical Center, Stanford, California
1993-1999	Assistant Professor of Pathology, Department of Pathology, Stanford University Medical Center, Stanford, California
1999-	Associate Professor of Pathology, Department of Pathology, Stanford University Medical Center, Stanford, California
2008-	Professor, Department of Pathology, Stanford University Medical Center Stanford, California

LICENSURE

1989	New Mexico, #89-123 (currently inactive)
1990	California, HG-069115
2011	Nevada, 14213

NATIONAL PROVIDER IDENTIFIER

2024	1528120896

BOARD CERTIFICATION

1989	Diplomate, American Board of Medical Examiners
1991	Diplomate, American Board of Pathology, Anatomic and Clinical Pathology
2014	Voluntary Recertification, American Board of Pathology, Anatomic and Clinical Pathology

PROFESSIONAL MEMBERSHIPS

1990-	U.S. and Canadian International Academy of Pathologists
1996-	International Society of Gynecological Pathologists
1996-	South Bay Pathology Society
1997-	American Society of Clinical Pathologists
1997	International Society of Breast Pathology
1999	Gynecologic Oncology Group
2004	American Society of Clinical Oncology
2005-	College of American Pathologists
2006-	California Society of Pathologists
2007-	International Gynecologic Cancer Society
2008-	Arthur Purdy Stout Society
2010-	Association of Directors of Anatomic Surgical Pathology
2013-	The Rodger C. Haggitt Gastrointestinal Pathology Society
2016-	Pancreatobiliary Pathology Society

ADMINISTRATIVE AND SCIENTIFIC COMMITTEE APPOINTMENTS

1993-1994	Abstract Review Board, Gastrointestinal Pathology, United States and Canadian Academy of Pathologists
1994-2009	Admissions Panel, Stanford University School of Medicine, Stanford, California
1996-2008	Pathology Working Group Committee, National Cancer Institute, Breast and Ovarian Cancer Family Registry
2000-2001	Strategic Planning Committee on Research Space, Department of Pathology, Stanford University School of Medicine, Stanford, California
2000-2003	Alternate Senator, Faculty Senate, Stanford University School of Medicine, Stanford, California
2001-2009	Committee on Admissions, Stanford University School of Medicine, Stanford, California
2001-2002	Chair, Hematopathology Search Committee, Department of Pathology, Stanford University, Stanford, California
2001-2002	Committee on Women in Medicine and Science, Stanford University School of Medicine, Stanford, California
2001-2010	Co-Chair, Residency Selection Committee, Department of Pathology, Stanford University, Stanford, California
2002-2003	Renal Pathology Search Committee, Department of Pathology, Stanford University, Stanford, California
2001-	Adjunct Clinical Faculty Appointments and Promotions Committee, Department of Pathology, Stanford University, Stanford, California
2002-2004	Course Director, Surgical Pathology Clerkship 302A, Stanford University School of Medicine, Stanford, California
2002-2010	Associate Director, Residency Training Program, Department of Pathology, Stanford University, Stanford, California
2003-2008	Chair, Pediatric Pathology Search Committee, Department of Pathology, Stanford University, Stanford, California
2002-2009	Course Co-Director, Current Issues in Anatomic Pathology, University of San Francisco-Stanford Postgraduate Course, San Francisco, California
2004-2011	Associate Director of Surgical Pathology, Department of Pathology, Stanford University, Stanford, California
2004-2005	Co-Director, Women's Health Module, Human Health & Disease 223, Stanford University School of Medicine
2002-2003	Longitudinal Committee on Medical Education, Subcommittee on Admissions, Stanford University School of Medicine, Stanford, California
2005-2011	Cancer Care Committee, Stanford Comprehensive Cancer Center, Stanford, California
2005-	American Board of Pathology Test Development and Advisory 201Committee, The American Board of Pathology, Tampa, Florida
2005-2010	Associate Chair of Pathology for Residency Training, Department of Pathology, Stanford University, Stanford, California
2006-2007	Gynecologic Oncology Search Committee, Department of Gynecology,

	Stanford University, Stanford, California
2006-	Associate Member, Stanford Comprehensive Cancer Center, Stanford, California
2006-2012	Breast Oncology Program Director Search Committee, Stanford Comprehensive Cancer Center, Stanford, California
2007-	Gynecological Cancer Protocol Review Panel, College of American Pathologists
2007-	Education Committee, California Society of Pathologists
2007-2016	Director, Gynecologic and Breast Pathology Fellowship
2007-	Director, Gynecologic Pathology
2007-2011	Neuropathology Search Committee, Department of Pathology, Stanford University, Stanford, California
2007-2014	Treasurer, International Society of Gynecological Pathologists
2007-2013	Institutional Review Board, Stanford University School of Medicine, Stanford, California
2007-2008	Task Force on Industry Support of CME, Stanford University School of Medicine, Stanford, California
2008-2016	Chair, Quality Improvement Committee (PPEC), Department of Pathology, Stanford University School of Medicine, Stanford, California
2008-2012	National Cancer Institute, Breast Cancer Family Registry, Biospecimen Working Group
2009-2017	Medical Director, Stanford Medicine Outpatient Center Laboratory of Surgical Pathology, Stanford Medicine, Redwood City, California
2009-	AANCART California Biorepository Research Network
2009-2014	Arthur Purdy Stout Society Prize and Awards Committee, Arthur Purdy Stout Society
2010-	Council, Association of Directors of Anatomic Surgical Pathology
2010-2012	Co-Director of Surgical Pathology, Department of Pathology, Stanford University, Stanford, California
2011-	Ambassador, United States and Canadian Academy of Pathology
2011-2014	Tissue Committee, Lucile Packard Children's Hospital, Stanford, California
2011-2016	Care Improvement Committee, Stanford University Hospital, Stanford, California
2011-	Director, Gastrointestinal Pathology
2011-2012	Physicianship and Leadership Working Group, Transforming Medical Education Initiative, Stanford School of Medicine, Stanford, California
2012	CAP/ASCCP Lower Anogenital Squamous Terminology (LAST) Consensus Statement Independent Review Panel
2012-2018	Director, Stanford Tissue Procurement Facility, Stanford Cancer Center
2012	Gynecologic Pathology Search Committee, Department of Pathology, Stanford University, Stanford, California
2012-2017	Senator-at-Large, Stanford Medical School Faculty Senate, Stanford University, Stanford, California
2012	Councilor, International Academy of Pathology, US-Canadian Division

2013	Molecular Therapeutics in Gynecologic Oncology Search Committee, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology and Division of Radiation & Cancer Biology, Department of Radiation Oncology, Stanford, California
2013	World Health Organization Tumors of the Female Genital Tract Consensus Meeting, Lyon, France
2013-2018	Endometrial Cancer Biomarker Reporting Panel, College of American Pathologists
2013-	American Medical Foundation for Peer Review and Education
2013-2017	Delegate to the California Delegation, College of American Pathologists House of Delegates
2013-	Scientific Advisory Board, Stop GCT, Ovarian Cancer Research Foundation
2013-	Director, Gastrointestinal Pathology Fellowship
2014-	Consultant, American Medical Foundation for Peer Review & Education
2014-	Vice President, Association of Directors of Anatomic and Surgical Pathology
2014-2016	Education Committee, International Society of Gynecological Pathologists
2014-	Cancer Biomarker Reporting Committee, College of American Pathologists
2014-	Molecular Oncology Tumor Board, ASCO University and College of American Pathologists
2014-2016	Chair, Stanford Hospital Tissue Committee, Stanford Health Care, Stanford, California
2014-	Action Group: Pathology Practice Guidance, College of American Pathologists
2014-2017	Chair, Endometrial Cancer Biomarker Reporting Panel, College of American Pathologists
2014	Faculty Search Committee, Department of Pathology, Stanford, California
2014	Councilor, International Academy of Pathology, US-Canadian Division
2016-2018	President, Association of Directors of Anatomic and Surgical Pathology
2016-	Steering Committee, Gynecologic Cancer InterGroup (GCIG) Gyne Oncology Pathology Working Group
2016	Organizer, Scientific Symposiums International, Annual Dr. Richard L. Kempson Surgical Pathology Course
2016-	Director, Gynecologic Pathology Fellowship
2017	NIDDK Liver Tissue and Cell Distribution System Review Panel
2017	US Pathology Biomarker Advisory Board, Merck
2017	Well-Being Directors Council, Stanford WellMD Center, Stanford, California
2018	NCI Specialized Programs of Research Excellence (SPORE) Review Panel
2018	NCI Special Emphasis Panel, Feasibility and Planning Studies for

	Development of Specialized Programs of Research Excellence (SPOREs) to Investigate Cancer Health Disparities (P20)
2018	Advisory Panel, Editorial Board of Cancer.Net, American Society of Clinical Oncology
2018	Pathology Department Liaison for Wellness, Inclusion, and Diversity
2019	NCI Human Tumor Atlas Network (HTAN) Biospecimen Working Group
2019	World Health Organization Tumors of the Female Genital Tract Expert Editorial Board, International Agency for Research on Cancer
2019	American Society of Clinical Oncology Cancer.Net Review Panel, Ovarian, Fallopian Tube, and Peritoneal Cancer
2019	California Comprehensive Cancer Control Plan Colorectal Cancer Subcommittee
2019	California Comprehensive Cancer Control Plan Cervical Cancer / HPV Subcommittee
2019	Gastric Cancer Advisory Board, Astellas
2019	Oncology GI-GU Search Committee, Stanford Cancer Center
2019	Appointment and Promotion Oversight Committee, Department of Pathology, Stanford California
2019	United States & Canadian Academy of Pathology Mentoring Academy
2020	NCI Specialized Programs of Research Excellence (SPORE) Review Panel
2020	American Society of Clinical Oncology Cancer.Net Review Panel, Ovarian, Fallopian Tube, and Peritoneal Cancer
2020	European Society of Gynecological Oncology & Gynecologic Cancer Intergroup Borderline Ovarian Tumors Working Group
2020	Body Imaging Faculty Search Committee, Department of Radiology, Stanford California
2020	Member, Gynecologic Cancer Section, Faculty Opinions, F1000 Prime
2021	Member, Board of Directors, United States and Canadian Society of Pathology
2021	McCormick and Gabilan Faculty Award Review Committee, Office of Faculty Development and Diversity, Stanford School of Medicine
2022	Member, Gastroenterology Inflammatory Bowel Disease Faculty Search Committee, Division of Gastroenterology and Hepatology in the Department of Medicine
2022	Mersana Therapeutics Advisory Board
2023	AstraZeneca US Precision Medicine Pathologist Steering Committee
2024	Medical Advisory Board: GI Manifestations of Indolent Systemic Mastocytosis, Blueprint Medicines
2024	Verastem Pathology Advisory Board

EDITORIAL BOARD

1993-	Advances in Anatomic Pathology
1993-2001	Advances in Gastroenterology, Hepatology and Clinical Nutrition
1996-	International Journal of Gynecological Pathology

2003-	Applied Immunohistochemistry and Molecular Morphology
2005-	American Journal of Surgical Pathology
2009-	Associate Editor, Digestive Diseases and Sciences, Stanford Multidisciplinary Seminars
2009-	Pathology Research International
2009-2020	Modern Pathology
2009-	PathXchange Editorial Panel
2013-	Pathology Discovery (Senior Editor)
2013-	Seminars in Diagnostic Pathology
2014-	PLoS ONE
2016	Journal of Gastroenterology, Hepatology and Endoscopy
2016-	American Journal of Surgical Pathology: Reviews & Report
2021-	European Journal of Gynaecologic Oncology

***Journal Ad Hoc Reviewer**:*

American Journal of Gastroenterology
American Journal of Obstetrics and Gynecology
American Journal of Pathology
Annals of Oncology
Archives of Pathology and Laboratory Medicine
BMC Cancer
BMC Gastroenterology
British Journal of Cancer
Cancer
Cancer Epidemiology, Biomarkers and Prevention
Cancer Research
Clinical Medicine-Pathology
Clinical Microbiology and Infection
Colorectal Disease
Digestive Diseases and Sciences
Expert Review of Anticancer Therapy
Gastrointestinal Cancer: Targets and Therapy
Gut
Gynecologic Oncology
Histology and Histopathology
Histopathology
Human Pathology
International Journal of Gynecological Cancer
International Journal of Medical Sciences
Journal of Clinical Oncology
Journal of Obstetrics and Gynaecology
Journal of Pathology
Journal of Reproductive Medicine
Journal of Zhejiang University-SCIENCE B
Medical Science Monitor

Molecular and Cellular Biology
Molecular Cancer Therapeutics
Obstetrics and Gynecology International
Oncogene
The Lancet
The Lancet Digital Health
The Surgery Journal
Virchows Archives
World Journal of Surgical Oncology

External Grant Reviewer:

American Institute of Biological Sciences
Dutch Cancer Society
French National Cancer Institute
Irish Health Research Board
Italian Association for Cancer Research
Physicians' Services Incorporated Foundation
Qatar National Research Fund

HONORS AND AWARDS

1984	Khatali Award in Recognition of an Outstanding Medical Student, University of New Mexico School of Medicine, Albuquerque, New Mexico
1984	Faculty Award of Excellence, University of New Mexico School of Medicine, Albuquerque, New Mexico
1984	Gordon Award in Pathology, University of New Mexico School of Medicine, Albuquerque, New Mexico
1994	Katharine McCormick Faculty Award, Stanford University Medical Center
1996	American Cancer Society Clinical Oncology Career Development Award
1996	American Cancer Society Institutional Research Grant
2003	Service Award for Academic Advising, Undergraduate Advising Center, Stanford University, Stanford, California
2010	Excellence in Teaching, Women's Health Unit, Human Health and Disease, Stanford University School of Medicine, Stanford, California
2012	Excellence in Teaching, Women's Health Unit, Human Health and Disease, Stanford University School of Medicine, Stanford, California
2016	Excellence in Teaching Nominee, Human Health and Disease, Stanford University School of Medicine, Stanford, California
2018	ACES Honorary Award, Stanford Health Care, Stanford, California
2018	Richard L Kempson Endowed Professor of Surgical Pathology

TEACHING ACTIVITIES

1993-2005	Pathology 230C Lecturer: Endometrium, Myometrium & Fallopian Tube, Ovary I & II, Stanford University School of Medicine, Stanford, California
1993-2005	Pathology 230C Laboratory Instructor & Small Group Session Leader: Gynecologic & Breast Pathology, Stanford University School of Medicine, Stanford, California
1993-2005	Pathology 230C Laboratory Instructor and Small Group Session Leader: Endocrine and Bone Pathology, Stanford University School of Medicine, Stanford, California
1994	Lecturer, Anatomic Pathology Residency Training Program: GI Pathology I-VI, Department of Pathology, Stanford University, Stanford, California
1994-2005	Pathology 230C Lecturer: Breast Pathology I & II, Stanford University School of Medicine, Stanford, California
1995-2005	Lecturer, Anatomic Pathology Residency Training Program: Gyn Pathology, Department of Pathology, Stanford University, Stanford, California
1996	Adult GI Clinical-Pathologic Correlation Conference, Laboratory of Surgical Pathology, Stanford University Hospital and Medical Center, Stanford, California
2000-2005	Endocrine Pathology Laboratory Coordinator, Stanford University School of Medicine, Stanford, California
2003	Pediatric GI Clinical-Pathologic Correlation Conference, Laboratory of Surgical Pathology, Stanford University Hospital and Medical Center, Stanford, California
2004	Anatomic Pathology Didactic Lecture Series Organizer, Department of Pathology, Stanford University, Stanford, California
2005-2006	Human Health & Disease 223 Lecturer: Endometrium, Myometrium & Fallopian Tube, Ovary I & II, Stanford University School of Medicine, Stanford, California
2005-2006	Human Health & Disease 223 Lecturer: Breast I & II, Stanford University School of Medicine, Stanford, California
2005-2006	Human Health & Disease 223 Small Group Session Leader: Gynecologic Pathology, Stanford University School of Medicine, Stanford, California
2005-2006	Human Health & Disease 223 Small Group Session Leader: Breast Pathology, Stanford University School of Medicine, Stanford, California
2005	Lecturer, Anatomic Pathology Residency Training Program: Ovarian Neoplasia I-VI, Department of Pathology, Stanford University, Stanford, California
2008	Digestive Disease Conference, Stanford University School of Medicine, Stanford, California
2008	Human Health & Disease 223 Lecturer: GI Pathology I-II, Stanford University School of Medicine, Stanford, California
2008	Annual QA/QI Lecture: Quality in the Laboratory and Regulatory Agencies, Department of Pathology, Stanford University, Stanford, California
2008	Human Health & Disease 223 Lecturer: Endometrium, Myometrium &

	Fallopian Tube, Ovary I & II, Stanford University School of Medicine, Stanford, California
2008	Human Health & Disease 223 Small Group Session Leader: Gynecologic Pathology, Stanford University School of Medicine, Stanford, California
2009	Digestive Disease Conference, Stanford University School of Medicine, Stanford, California
2009	Human Health & Disease 223 Lecturer: GI Pathology I-II, Stanford University School of Medicine, Stanford, California
2009	Human Health & Disease 223 Lecturer: Endometrium, Myometrium & Fallopian Tube, Ovary I & II, Stanford University School of Medicine, Stanford, California
2010	Human Health & Disease 223 Lecturer: Myometrium & Fallopian Tube, Ovary I & II, Stanford University School of Medicine, Stanford, California
2011	Pediatric GI Pathology, Division of Pediatric Gastroenterology, Lucile Packard Children's Hospital, Palo Alto, California
2011	Human Health & Disease 223 Lecturer: Endometrium, Myometrium & Fallopian Tube, Ovary I & II, Stanford University School of Medicine, Stanford, California
2012	Human Health & Disease 223 Lecturer: GI Pathology I, Stanford University School of Medicine, Stanford, California
2012	Human Health & Disease 223 Lecturer: Endometrium, Myometrium & Fallopian Tube, Ovary I & II, Stanford University School of Medicine, Stanford, California
2012	Gastroenterology Fellows: Colorectal Pathology, Stanford University School of Medicine, Stanford, California
2013	Pediatric GI Pathology, Division of Pediatric Gastroenterology, Lucile Packard Children's Hospital, Palo Alto, California
2013	Gastroenterology Fellows: Colorectal Pathology, Stanford University School of Medicine, Stanford, California
2013	Human Health & Disease 223 Lecturer: GI Pathology I, Stanford University School of Medicine, Stanford, California
2013	Human Health & Disease 223 Small Group Session Leader: Liver Pathology, Stanford University School of Medicine, Stanford, California
2013	Human Health & Disease 223 Lecturer: Myometrium & Fallopian Tube, Ovary I & II, Stanford University School of Medicine, Stanford, California
2013	Human Health & Disease 223 Small Group Session Leader: Gynecologic Pathology, Stanford University School of Medicine, Stanford, California
2014	Gastroenterology Fellows: Pathology of the Upper Gastrointestinal Tract, Stanford University School of Medicine, Stanford, California
2014	Human Health & Disease 223 Lecturer: GI Pathology I, Stanford University School of Medicine, Stanford, California
2014	Human Health & Disease 223 Small Group Session Leader: Gastrointestinal Pathology, Stanford University School of Medicine, Stanford, California

2014	Human Health & Disease 223 Small Group Session Leader: Liver Pathology, Stanford University School of Medicine, Stanford, California
2014	Human Health & Disease 223 Co-Lecturer: Endometrium, Stanford University School of Medicine, Stanford, California
2014	Human Health & Disease 223 Lecturer: Myometrium & Fallopian Tube, Ovary I & II, Stanford University School of Medicine, Stanford, California
2014	Human Health & Disease 223 Small Group Session Leader: Gynecologic Pathology, Stanford University School of Medicine, Stanford, California
2015	Gastroenterology Fellows: Pathology of the Lower Gastrointestinal Tract, Stanford University School of Medicine, Stanford, California
2015	Human Health & Disease 223 Lecturer: Ovary, Stanford University School of Medicine, Stanford, California
2015	Human Health & Disease 223 Lecturer: Endometrium, Stanford University School of Medicine, Stanford, California
2015	Human Health & Disease 223 Lecturer: Lower GI Tract, Stanford University School of Medicine, Stanford, California
2015	Human Health & Disease 223 Small Group Session Leader: Gynecologic Pathology, Stanford University School of Medicine, Stanford, California
2016	Human Health & Disease 223 Lecturer: Lower GI Tract I & II, Stanford University School of Medicine, Stanford, California
2017	Human Health & Disease 223 Lecturer: Lower GI Tract I & II, Stanford University School of Medicine, Stanford, California
2018	Gastroenterology Fellows: Colorectal Polyps: A Managerial Approach, Stanford University School of Medicine, Stanford, California

POST-DOCTORAL FELLOWS (GYNECOLOGIC PATHOLOGY)

2007-2008	Ghada Esheba, MSc., M.D., Tanta Hospital, Tanta, Egypt
2008-2009	Amy Ly, M.D., Massachusetts General Hospital, Boston, Massachusetts
2009-2010	William Rogers, M.D., El Camino Hospital, Mountain View, California
2010-2011	Jonathan Kitayama, M.D., Kaiser Permanente, Honolulu, Hawaii
2011-2012	Saul Offman, M.D., Dalhousie University, Halifax, Nova Scotia, Canada
2012-2013	Lorraine Pan, M.D., AmeriPath, Denver, Colorado
2013-2014	Michael R. Clay, M.D., University of Colorado Medicine, Denver, Colorado
2013-2014	Christopher Conklin, M.D., Surrey Memorial Hospital, British of Columbia, Canada
2014-2015	Mary O'Keefe, M.D., Denver Health Medical Center, Denver, Colorado
2015-2016	Laura Moench, M.D., Fairview Southdale Hospital, Minneapolis, Minnesota
2015-2016	Sucheta Srivastava, M.D., Associated Pathology Medical Group, Los Gatos, California
2016-2017	Sydney Card, M.D., The University of British Columbia, Vancouver British of Columbia, Canada
2016-2017	Koah Vierrkoetter M.D., The Queen's Medical Center, Honolulu, Hawaii

2017-2018	Dina Kokh, M.D., Fraser Health Authority, Vancouver, British Columbia, Canada
2017-2018	Soufianne El Hallani, M.D., University of Alberta, Royal Alexandra Hospital - Women's Hospital, Edmonton, Canada
2017-2018	Eric Gars, M.D., Stanford University, Stanford, California
2018-2019	Keegan Barry-Holson, M.D., Kaiser Permanente South San Francisco, California
2018-2019	David Levy, M.D., John Muir Medical Center, Walnut Creek, California
2018-2019	Megan Fitzpatrick, M.D., University of Wisconsin, Madison, Wisconsin
2019-2020	Kelly Devereaux, M.D., Ph.D., New York University, New York City, New York
2019-2020	Juliana Weiel, M.D., Billings Clinic, Billings, Montana
2020-2021	Kevin Kohali, M.D., Stanford University, Stanford, California
2020-2021	Jenifer Pors, M.D., The University of British Columbia, Vancouver British of Columbia, Canada
2020-2021	Ellen Cai, M.D., Kelowna General Hospital, Kelowna, British Columbia
2021-2022	Erna Forgo, Cleveland Clinic, Cleveland, Ohio
2021-2022	Lucy Han, M.D., California Pacific Medical Center, San Francisco, California
2021-2022	Emily Ryan, M.D. Stanford University, Stanford, California
2022-2023	Xiaoming Zhang, MD, Stanford University, Stanford California
2022-2023	Troy Tenney, MD, University of New Mexico, Albuquerque, New Mexico
2023-2024	Ashley Monsrud, MD, Stanford University, Stanford California
2023-2024	Austin McHenry, MD, Stanford University, Stanford California

POST-DOCTORAL FELLOWS (GASTROINTESTINAL PATHOLOGY)

2013-2014	Michael DiMaio, M.D., Companion Diagnostics, Carpinteria, California
2014-2015	Chrisy Mafnas, M.D., Santa Clara Valley Medical Center, Santa Clara, California
2015-2016	Brock Martin, M.D., University of Louisville, Louisville, Kentucky
2015-2016	Christine Louie, M.D., Veteran’s Administration Medical Center, Palo Alto, California
2015-2016	Kurt Schaberg, M.D., University of California Davis, Davis, California
2016-2017	Adam Gomez, M.D., St. Joseph’s Hospital and Medical Center, Phoenix, Arizona
2016-2017	Azadeh Aghel, M.D., Kaiser Permanente South San Francisco, California
2017-2018	Ling Yan, M.D., Ph.D., Kaiser Mid Atlantic Regional Laboratory, Rockville, Maryland
2017-2018	Allison Zemeck, M.D., Kaiser Permanente Downey, Downey, California
2017-2018	Greg Charville, M.D, Ph.D., Stanford University, Stanford, California
2018-2019	Alaleh Esmaeili Shandiz, M.D., University of Kentucky, Louisville, Kentucky
2018-2019	Jordan Sim, M.D., Ottawa Hospital, Ottawa, Canada
2018-2019	Shyam Sampath Raghaven, M.D. University of Virginia, Charlottesville, Virgina

2019-2020	Gregory Scott, M.D., Ph.D., Oregon Health Sciences, Portland, Oregon
2019-2020	Anne Li Chen, M.D., Albany Medical College, Albany, New York
2019-2020	Nkechi Okonkwo, M.D., The Hospital at Westlake Medical Center, Austin, Texas
2020-2021	Erna Forgo, M.D., Cleveland Clinic, Cleveland, Ohio
2020-2021	Michael Pepper, M.D., Kaiser South San Francisco, South San Francisco, California
2020-2021	Joseph Fry, M.D., Kaiser Permanente Santa Clara, Santa Clara, California
2021-2022	Steven Chirieleison, M.D., Ph.D., Stanford University, Stanford, California
2021-2022	Cindy Wang, M.D., Stanford University, Stanford, California
2021-2022	Kyra Berg, M.D., College of Physicians and Surgeons of British Columbia, Vancouver, British Columbia
2021-2022	Dana Razzano, Orlando VA Healthcare System, University of Central Florida, Orlando, Florida
2022-2023	Tolson Nichols, MD, Stanford University, Stanford, California
2022-2023	Jeenal Gordhandas, MD, Centura Health, Denver, Colorado
2022-2023	Recep Nigdelioglu, MD, Sanford Medical Center, Fargo, North Dakota
2023-2024	Eric Ollila, MD, Stanford University, Stanford California
2023-2024	Hang Yang, MD, Stanford University, Stanford, California
2023-2024	Oyewale Shiyanbola, MD, Stanford University, Stanford, California

MEDICAL STUDENT RESEARCH SCHOLARS

2012-2013	Allison Zemek, Stanford University School of Medicine, Stanford, California

UNDERGRADUATE & HIGH SCHOOL RESEARCH ASSISTANTS

2010-2011	Sofia Liu, University of Pennsylvania, Philadelphia, Pennsylvania
2011-2012	Adita Mukund, Bellarmine College Preparatory, San Jose, California
2012-2013	Gerry Sann Rivera, Stanford University, Stanford, California
2013-2014	Jessica Li, Columbia University, New York, NY
2013-2015	Eugene Kwok, De Anza Community College, Cupertino, California
2014-2015	Jessika Baral, Mission San Jose High School, Fremont, California

VISITING SCHOLARS

2005	Takako Kiyokawa, M.D., Jikei University School of Medicine, Tokyo, Japan
2006	Thuan Cong Dang, M.D., Hue University Hospital, Hue Medical Center, Hue, Vietnam
2007	Geung Hwan Ahn, M.D., Ph.D., Sungkyunkwan University, Seoul, Korea
2007	Sharon S. Zhang, M.D., Ph.D., University of California San Diego, San Diego, California
2009	Joon Yim, M.D., Acupath Laboratories, New York, New York

2011	Esin Atik Dogan, MD, Antakya, Hatay, Turkey
2012	Vinicius Cabral, MD, Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil
2014	Justyna Szafranska, MD, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain
2015	Trishe Leong, M.D., Director of Anatomic Pathology, Austin Medical Center, Melbourne, Australia
2015	Gregorio W. Pereira, M.D., Federal University of São Paulo (UNIFESP), São Paulo, Brazil
2016	Minju Lee, M.D., Samsung Medical Center, Seoul, Korea
2018	Manas R. Baisakh, M.D. Odisha, India
2018	Shing Wong, Singapore General Hospital, Singapore

PLATFORM/PLENARY SESSION PRESENTATIONS

Longacre T, Crago S, Foucar K: Clinical, Cytochemical, Flow Cytometric Immunophenotyping and DNA Content Analysis of Hematogones. Platform Presentation, International Academy of Pathology, Washington, D.C., March 1988.

Longacre T, Dressler L, Willman C: Differential Expression of Myeloid Lineage Tyrosine-Kinase Genes in Acute Myeloid Leukemia (AML). Platform Presentation, International Academy of Pathology, Washington, D.C., March 1988.

Willman C, **Longacre T**, Stewart C: Identification of a New Biological Subtype of Acute Leukemia with a Dual NK Cell - Myeloid Phenotype. Platform Presentation, International Academy of Pathology, Washington, D.C., March 1988.

Longacre TA, Fenoglio-Preiser CM: Histologic Definition of Mixed Hyperplastic-Adenomatous Polyps: A Distinct Form Of Colorectal Neoplasia. Platform Presentation, United States and Canadian Academy of Pathology, March 1989.

Baker RJ, Hildebrandt RH, Rouse RV, Hendrickson, MR, **Longacre TA**: Uterine Tumors with Sex Cord Stromal Differentiation: Evidence for True Sex Cord Differentiation. Platform Presentation at the United States and Canadian Academy of Pathology Meeting, Washington D.C., March 1998.

Shibata A, **Longacre T**, Puligandla B, Parsonnet J, Habel L: Histologic Classification Of Gastric Adenocarcinoma For Epidemiologic Research: Concordance Between Pathologists, International Epidemiological Association, Florence, Italy, September 1999.

Kambham N,Vij R, Cartwright C, **Longacre TA**,. CMV Infection: A Significant Cause of Steroid-Refractory Ulcerative Colitis. Platform Presentation at the United States and Canadian Academy of Pathology Meeting, Washington D.C., March 2003.

Gilks B, Vanderhyden B, Zhu S, van de Rijn M, **Longacre T**. Distinction between Serous Borderline Tumors and Serous Carcinomas Based on mRNA Expression Profiling. Platform

Presentation at the United States and Canadian Academy of Pathology Meeting, Washington, D.C., March 2003.

Longacre T, Tazelaar H, Kempson R, Hendrickson M. Serous Tumors of Low Malignant Potential: Stanford Update. Platform Presentation at the United States and Canadian Academy of Pathology Meeting, Washington D.C., March 2003.

McKenney JM, Balzer BL, **Longacre TA**. Ovarian Serous Tumors of Low Malignant Potential with Stromal Microinvasion: A Clinicopathologic Study of 36 Cases, Platform Presentation at the United States and Canadian Academy of Pathology Meeting, Vancouver, B.C., March 2004.

McKinney JM, Balzer BL, **Longacre TA**. Histologic Patterns of Lymph Node Involvement In Women With Primary Ovarian Serous Tumors Of Low Malignant Potential (S-LMP), Platform Presentation, United States and Canadian Academy of Pathology Meeting, San Antonio, Texas, February 2005.

McKinney JM, Gilks CB, **Longacre TA**. The Classification of Extra-Ovarian Implants Associated with Ovarian Serous Tumors of Low Malignant Potential (S-LMP): clinicopathologic study of 181 cases, Platform Presentation, United States and Canadian Academy of Pathology Meeting, San Antonio, Texas, February 2005.

Liou WS, Hamilton CA, Cheung MK, Osann K, **Longacre TA**, Teng NN, Husain A, Dirbas F, Chan JK. Outcomes of women with double primary breast and ovarian carcinomas – an analysis of the SEER database. 35th Annual Meeting Society of Gynecologic Oncologists, Miami, Florida March 2005.

Hamilton CA, Cheung MK, Osann K, Husain A, Teng NN, Kapp DS, Chen LM, **Longacre TA**, Chan JK. Uterine papillary serous and clear cell histologies predict poorer survival compared to grade 3 endometrioid corpus cancer. 34th Annual Meeting of the Western Association of Gynecologic Oncologists, Santa Fe, New Mexico, June 2005.

West RB, Gilks CB, van de Rijn M, **Longacre TA**. Stromal signatures in ovarian serous tumors of low malignant potential and serous carcinoma. Platform Presentation, United States and Canadian Academy of Pathology Meeting, Atlanta, Georgia, February 2006.

Silva E, Vang R, Kurman R, Prat J, **Longacre T**. Invasive implants of serous borderline ovarian neoplasms – a multiinstitutional study. Platform Presentation, United States and Canadian Academy of Pathology Meeting, Atlanta, Georgia, February 2006.

Hazard K, **Longacre TA**. Ovarian surface epithelial neoplasms in the pediatric population. Platform Presentation, Pediatric Pathology Society Meeting, San Diego, California, March 2007.

Cuff J, **Longacre TA.** Ovarian endometrioid and clear cell carcinoma arise via different precursor lesions and have better prognosis when associated with endometriosis. Platform Presentation, United States and Canadian Academy of Pathology Meeting, Denver, Colorado, March 2009.

Mills AM, Ly A, Balzer BL, Hendrickson MR, Kempson RL, McKenney JK, **Longacre TA.** Cell cycle regulatory markers in uterine atypical leiomyoma, cellular leiomyoma, STUMP and leiomyosarcoma: immunohistochemical study of 74 cases with clinical follow-up. Platform Presentation, United States and Canadian Academy of Pathology Meeting, Washington D.C., March 2010.

Fujiwara M, Felberg A, Whittemore AS, McGuire VM, **Longacre TA.** Germline BRCA1 mutation positive ovarian cancer exhibits a distinctive highly specific phenotype. Platform Presentation, United States and Canadian Academy of Pathology Meeting, San Antonio, Texas, *International Society of Gynecological Pathologists Best Platform Presentation,* March 2011.

Moore FN, Pam, L, **Longacre TA**. Endometriosis-associated carcinomas exhibit significant site-specific differences: analysis of 396 cases. Platform Presentation, United States and Canadian Academy of Pathology Meeting, Vancouver, B.C., Canada, March 2012.

Martin B, Hazard K, **Longacre TA.** Evaluation of intestinal biopsies for pediatric enteropathy: A proposed immunohistochemical panel approach. Platform Presentation, Pediatric Pathology Society Meeting, San Diego, California, March 2013.

Martin BT, Mafnas CA, Ford JM, **Longacre TA**. Universal screening for gynecologic and colorectal cancer: A single institution experience. Platform Presentation, United States and Canadian Academy of Pathology Meeting, Boston, Massachusetts, March 2015.

Mafnas CA, Martin BT, Ford JM, **Longacre TA**. Lynch syndrome screening: discordance in MMR and germline test results. Platform Presentation, United States and Canadian Academy of Pathology Meeting, Boston, Massachusetts, March 2015.

Gomez AJ, Burton A, Steiner D, Zehnder J, **Longacre TA**. Detection of mutations in DNA polymerase ϵ (POLE) in colorectal carcinomas with intact mismatch repair proteins. Platform Presentation, United States and Canadian Academy of Pathology Meeting, *Winner of Society of Gastrointestinal Pathologists Best Platform Presentation*, El Paso, Texas, March 2017.

EXTRAMURAL PRESENTATIONS AND CONFERENCES

Workshop: Immunologic Approaches to the Diagnosis of Neoplasms. American Society of Clinical Pathology Spring Meeting, Seattle, Washington, April 1994.

The Florida Society of Pathologists' 21st Annual Anatomic Pathology Conference: Surface Epithelial Neoplasms of the Ovary and Their Differential Diagnosis, Lake Buena Vista, Florida, January 1995.

SmithKline Diagnostics: Colorectal Dysplasia and Carcinoma. San Jose, California, February 1995.

Updates in Pathology: Well Differentiated Endometrial Carcinoma: A Proposed Diagnostic Test

for Myoinvasion, University of California San Francisco, San Francisco, California, March 1995.

Workshop: Immunologic Approaches to the Diagnosis of Neoplasms. The American Society of Clinical Pathology Spring Meeting, Orlando, Florida, April 1995.

Current Concepts in Pathology: Atypical Polypoid Adenomyomas, Stanford, California, September 1995.

Workshop: Immunologic Approaches to the Diagnosis of Neoplasms. The American Society of Clinical Pathology Spring Meeting, Washington D.C., June 1996.

Co-chair and Panel Member, National Cancer Institute Breast and Ovarian Cancer Family Registry, NCI Pathology Working Group Committee Workshop, Stanford, California, September 1996.

Current Concepts in Pathology: Diagnostic Pitfalls in Gynecologic Pathology, Stanford, California, September 1996.

Moderator, Gastrointestinal Pathology Plenary Session, United States and Canadian Academy of Pathology, March 1997.

Workshop: Immunologic Approaches to the Diagnosis of Neoplasms. The American Society of Clinical Pathology Spring Meeting, Washington, D.C., September 1998.

Current Issues in Anatomic Pathology: Diagnostic Problems in Small Bowel Biopsies, San Francisco, California, May 1999.

Workshop: Immunologic Approaches to the Diagnosis of Neoplasms. The American Society of Clinical Pathology Spring Meeting, New Orleans, Louisiana, September 1999.

Workshop: Immunologic Approaches to the Diagnosis of Neoplasms. The American Society of Clinical Pathology Spring Meeting, Las Vegas, Nevada, February 2000.

Current Issues in Anatomic Pathology: Dysplasia in Inflammatory Bowel Disease: Diagnosis and Clinical Consequences, UCSF-Stanford Course, San Francisco, California, May 2000.

Current Issues in Anatomic Pathology: Atypical Polypoid Adenomyoma/Well-Differentiated Adenocarcinoma, San Francisco, California, May 2002.

National Cancer Institute Breast and Ovarian Cancer Family Registry Steering Committee: Pathology Subcommittee, Hawaii, February 2003.

Current Issues in Anatomic Pathology: Problems in the Diagnosis of Appendiceal Epithelial Tumors and Pseudomyxoma, San Francisco, California, May 2003.

National Cancer Institute: Borderline Ovarian Tumor Consensus Workshop, Bethesda,

Maryland, August 2003.

Moderator, Gynecologic Pathology Plenary Session, United States and Canadian Academy of Pathology, Vancouver, British Columbia, Canada, March 2004.

Gynecologic Pathology Evening Specialty Conference: Strategies for Predicting Site of Origin of Problematic Glandular Proliferations in Uterine Curettings, United States and Canadian Academy of Pathology, San Antonio, Texas, March 2005.

Current Issues in Anatomic Pathology: Problems in Extra-Ovarian Serous Neoplasia, San Francisco, California, May 2005.

GI Clinical Conference: Colitis: The Pathologist's Perspective, Division of Gastroenterology, Department of Internal Medicine, Stanford University School of Medicine, Stanford, California, September 2005.

Slide Seminar: Problems in Gynecological Pathology, Department of Pathology, University of New Mexico, Albuquerque, New Mexico, October 2005.

Sixth Annual International Conference on Ovarian Cancer: Serous Tumors of Low Malignant Potential: An Update, Memorial Sloan-Kettering Cancer Center, New York, NY, November 2005.

Grand Rounds: Serous Borderline Tumors: Classification, Clinical Management and Continuing Controversies, University of Pittsburgh, Pittsburgh, Pennsylvania, November 2005.

International Society of Gynecological Pathologists: Surface Epithelial Tumors of the Ovary. Part I. Borderline Tumors – Current State of the Art: Significance of Microinvasion and Lymph Node Involvement, United States and Canadian Academy of Pathology, Atlanta, Georgia, February 2006.

Grand Rounds: Ovarian Serous Tumors of Low Malignant Potential: A Risk Model for Disease Progression, University of California, Los Angeles, Los Angeles, California, March 2006.

Current Issues in Anatomic Pathology: Problematic Glandular Proliferations in Uterine Curettings: Strategies for Predicting Site of Origin, San Francisco, California, June 2006.

Visiting Professor and Lecturer: Hereditary Diffuse Gastric Cancer Syndrome, University of Manitoba, Winnipeg, Manitoba, Canada, June 2006.

Visiting Professor and Grand Rounds Lecturer: Hereditary Diffuse Gastric Cancer Syndrome: The Gene That Binds Families Together, Memorial-Sloan Kettering Cancer Center, New York, NY, October 2006.

Thirteenth Annual Practical Pathology at Whistler: Diagnostic Problems in Uterine Curettings, Chateau Whistler, Whistler, British Columbia, Canada, February 2007.

Thirteenth Annual Practical Pathology at Whistler: Mucinous Tumors in the Ovary: Primary or Metastatic? Chateau Whistler, Whistler, British Columbia, Canada, February 2007.

Short Course, Mesenchymal Neoplasms of the Female Genital Tract, United States and Canadian Academy of Pathology, San Diego, California, March 2007

Current Issues in Anatomic Pathology, Update on GI Neuroendocrine Tumors, San Francisco, California, May 2007.

5th Asia Pacific International Academy of Pathology Congress Meeting, Serous Borderline Tumors, Singapore, May 2007.

5th Asia Pacific International Academy of Pathology Congress Meeting: Mucinous Borderline Tumors, Singapore, May 2007.

Panel Member, Interesting Case Presentations, 5th Asia Pacific International Academy of Pathology Congress Meeting, Singapore, May 2007.

Women's Cancers: Surgical Pathology, Cytology and Immunohistochemistry of Breast and Genital Tumors: Endometrial Stromal and Related Tumors, Hilton Head Island, South Carolina, June 2007.

Women's Cancers: Surgical Pathology, Cytology and Immunohistochemistry of Breast and Genital Tumors: Endometrioid and Clear Cell Tumors of the Ovary: Differential Diagnosis, Hilton Head Island, South Carolina, June 2007.

Women's Cancers: Surgical Pathology, Cytology and Immunohistochemistry of Breast and Genital Tumors: The Nonneoplastic Endometrium, Hilton Head Island, South Carolina, June 2007.

Women's Cancers: Surgical Pathology, Cytology and Immunohistochemistry of Breast and Genital Tumors: Adenocarcinoma of the Cervix: Problems and Differential Diagnosis, Hilton Head Island, South Carolina, June 2007.

Women's Cancers: Surgical Pathology, Cytology and Immunohistochemistry of Breast and Genital Tumors: Mucinous Tumors of the Ovary: From Adenoma to Carcinoma and How to Rule Out Metastasis, Hilton Head Island, South Carolina, June 2007.

.

Diagnostic Pathology Update: Updates In Gyn Pathology, United States and Canadian Academy of Pathology, Banff, Alberta, Canada, July 2007.

Mortimer & Harold Cohen Lecturer, Serous Epithelial Neoplasms of the Ovary: Recent Developments and Diagnostic Problems, Magee-Women's Hospital, University of Pittsburgh, Pittsburgh, Pennsylvania, October 2007.

Invited Lecturer, Kaiser Permanente Hospital, Walnut Creek, Evaluation of the Gynecologic Frozen Section: Common Pitfalls and How to Avoid Them, November 2007.

Guest Speaker, Indian Continuing Medical Education, Endocervical Adenocarcinoma: Diagnostic Problems and Special Variants, Chandigarh, India, November 2007

Guest Speaker, National Indian Academy of Pathology and Microbiology, Update on Gastrointestinal Stromal Tumors: Getting the *Gist* of GIST, Chandigarh, India, November 2007.

Guest Speaker and Panel Member, California Society of Pathologists Annual Seminar, San Francisco, California, December 2007.

Visiting Professor and Guest Lecturer, Tanta University, Tanta, Egypt, February 2008.

Guest Lecture, Kaiser Permanente Hospital, Walnut Creek, Appendiceal Neoplasms: Pseudomyxoma and Other Diagnostic Problems, March 2008.

Guest Lecture, Kaiser Permanente Hospital, Walnut Creek, Sex Cord Stromal Neoplasms of the Ovary, March 2008.

Faculty, Short Course, Mesenchymal Neoplasms of the Female Genital Tract, United States and Canadian Academy of Pathology, Denver, Colorado, March 2008.

Invited Speaker, International Society of Gynecological Pathologists: Atypical Endometrial Hyperplasia and Endometrial Intraepithelial Neoplasia: A Step Towards Constructive Dialogue, United States and Canadian Academy of Pathology, Denver, Colorado, March 2008.

Invited Speaker, Rodger C. Haggitt Gastrointestinal Pathology Society: Challenging Cases in Anal Pathology, United States and Canadian Academy of Pathology, Denver, Colorado, March 2008.

Moderator, Gynecologic Pathology Plenary Session, United States and Canadian Academy of Pathology, Denver, Colorado, March 2008.

Invited Speaker, Gynecologic Pathology Evening Specialty Conference: Strategies for Evaluating Problematic Mesenchymal Tumors in Uterine Curettings, United States and Canadian Academy of Pathology, Denver, Colorado, March 2008.

Guest Lecturer, Surgical Pathology of Neoplastic Diseases, Memorial Sloan-Kettering Cancer Center, New York, NY, May 2008.

Faculty, Diagnostic Pathology Update: Updates in Gynecologic Pathology, United States and Canadian Academy of Pathology, Maui, Hawaii, July 2008.

Invited Lecturer, Ovarian Clear Cell and Serous Carcinoma: Recent Developments, Updates in Cancer Diagnosis, Samsung Hospital, Seoul, Korea, September 2008.

Guest Speaker, XXVII International Congress of the International Academy of Pathology, Uterine Mesenchymal Tumors, Athens, Greece, October 2008.

Guest Lecturer, Serous Borderline Tumors and Atypical Polypoid Adenomyoma, Gynecologic Pathology Post-Graduate Course, Kyoto, Japan, November 2008

Invited Speaker, Top Ten Diagnoses Not To Be Missed In Ovarian Pathology, Video Tutorial, California Society of Pathologists Annual Seminar, Los Angeles, California, December 2008.

Invited Speaker, Problems in Ovarian Tumor Pathology, Walnut Creek Kaiser Permanente, Walnut Creek, California, December 2008.

Slide Seminar, Selected Problems in Pelvic Serous Carcinoma, Department of Pathology, University of Washington, Seattle, Washington, February 2009

Moderator, Gynecologic Pathology Plenary Session, United States and Canadian Academy of Pathology, Boston, Massachusetts, March 2009.

Current Issues in Anatomic Pathology, Clinical Significance of MSI, KRAS and EGFR Assays in Gastrointestinal Tumors. San Francisco, California, May 2009.

Invited Lecturer, Women's Cancers: Surgical Pathology, Cytology and Immunohistochemistry of Breast and Genital Tumors, Mauna Kea Resort, Big Island of Hawaii, June 2009.

Faculty, Diagnostic Pathology Update: Updates in Gynecological and Placental Pathology, United States and Canadian Academy of Pathology, Niagara Falls, New York, July 2009.

Invited Speaker, 7th Asia Pacific International Academy of Pathology Congress Meeting, Kerala, India, August 2009.

Invited Speaker, Mismatch Repair Protein Deficiency in Colorectal Carcinoma, California Pacific Medical Center, Department of Pathology, San Francisco, CA, December 2009

Invited Speaker, Ovarian Pathology, California Society of Pathologists Annual Seminar, San Francisco, California, December 2009.

Invited Lecturer, Ohio State University Pathology Update, Columbus Ohio, August 2010

Update on Pathology of Neuroendocrine Tumors**,** Neuroendocrine Tumor Patient Education Conference, Caring for Carcinoid Foundation & Stanford Cancer Center, Stanford, California, September 2010

Invited Speaker, International Gynecologic Cancer Society, Prague, Hereditary "Ovarian" Cancer: Update & Role of the Fallopian Tube, October 2010

Invited Speaker, International Academy of Pathology, Surgical Pathology: Update in Ovarian Pathology: The Concept of Pelvic Serous Carcinoma, Sao Paolo, Brazil, October 2010

Invited Speaker and Panelist, International Academy of Pathology, Surgical Pathology Case Presentation, Sao Paolo, Brazil, October 2010

Invited Speaker and Panelist, Arias Stella Society, Sao Paolo, Brazil, October 2010

Invited Speaker, Avances Recientos en Patología Quirúrgica y su Impacto Terapéutico, Hospital de Oncologia, Centro Medico Nacional, Siglo XXI, Mexico City, Mexico, January 2011

Invited Speaker, International Society of Gynecological Pathologists: Clear Cell Carcinoma: Not Everything Is Always as Clear As It Seems. United States and Canadian Academy of Pathology, San Antonio, Texas, February 2011

Invited Speaker, Pacific Northwest Society of Pathology, Vancouver, BC, May 2011

Invited Speaker, The British Association of Gynaecological Pathologists, London, England, June 2011

Visiting Professor, University of Hawaii, Honolulu, Hawaii, August 2011

Guest Speaker, Hawaii Society of Pathology, Honolulu, Hawaii, August 2011

USCAP Ambassador, 6th Surgical Pathology Conference of the West African Division of the International Academy of Pathology, Abuja, Nigeria, August 2011

Faculty, Gynecologic Pathology: Gross Examination of Uterine, Fallopian Tube and Ovarian Specimens, American Association of Pathologists' Assistants' 37th Annual Continuing Education and Business Conference, San Francisco, California, August 2011

Neuroendocrine Tumor Patient Education Conference, Caring for Carcinoid Foundation & Stanford Cancer Center, Stanford, California, September 2011

Invited Speaker, Oregon Pathologists Association, Portland, Oregon, September 2011

Faculty, Short Course, Hereditary Gynecologic Cancer Syndromes, American Society for Clinical Pathology, Las Vegas, Nevada, October 2011.

Invited Speaker, Update in GI Pathology, Department of Pathology, Tata Memorial Hospital, Mumbai, India, November 2011

Invited Speaker and Panel Member, Diagnostic Problems in Surgical Pathology, California Society of Pathologists Annual Seminar, San Francisco, California, December 2011.

Molecular Advances in Gynecologic Pathology: Screening for Hereditary Cancer Syndromes,

Memorial Sloan-Kettering Grand Rounds, New York, NY, March 2012

Biobanking for Clinical Care in the Molecular Era, ADASP, United States and Canadian Academy of Pathology, Vancouver, British of Columbia, Canada, March 2012.

Moderator, Gynecologic and Oncology Plenary Session, March 2012, United States and Canadian Academy of Pathology, Vancouver, British of Columbia, Canada, March 2012

Faculty, Short Course, Glandular Lesions of the Cervix: An Integrated Cytologic and Histologic Approach, United States and Canadian Academy of Pathology, Vancouver, British of Columbia, Canada, March 2012.

Invited Speaker and Panel Member, Surgical Pathology Specialty Conference, United States and Canadian Academy of Pathology, Vancouver, British of Columbia, Canada, March 2012.

Molecular Advances in Gynecologic Pathology: Screening for Hereditary Cancer Syndromes, Yale Pathology Grand Rounds, New Haven, Connecticut, April 2012

Invited Lecturer, Borderline Tumors of the Ovary, New York Pathology Society, New York, NY, May 2012

Invited Speaker, Mexico Society of Pathology Annual Meeting, Gynecologic Pathology Long Course, Queretaro, Mexico, May 2012

Invited Speaker, Problems in Anal Pathology, Stars in the Mountains, The Colorado Society of Clinical Pathologists, Vail, Colorado, July 2012

Invited Speaker, Hereditary Cancer Syndromes, Stars in the Mountains, The Colorado Society of Clinical Pathologists, Vail, Colorado, July 2012

Council Meeting, International Society of Gynecological Pathologists, WHO Classification of Gynecologic Tumors, New York, New York, August 2012

Faculty, 2012 International Academy of Pathology Congress, Cape Town, South Africa, October 2012

Invited Speaker and Panel Member, Gynecologic Pathology Slide Seminar, Cape Town, South Africa, October 2012

Invited Speaker, GI Polyps, California Society of Pathologists Annual Seminar, San Francisco, California, December 2012

Invited Speaker, Polyps and Polyposis Syndromes, Kaiser Northern California, Webinar, Stanford, California, January 2013

Invited Speaker, Molecular Medicine TriConference, San Francisco, California, February 2013

Course Instructor, Morphologic Phenotype(s) of BRCA1/2 Breast and Ovarian Cancer: Implications for Screening, American Society of Clinical Pathology, Rancho Mirage, California, February 2013

Faculty, Short Course, Glandular Lesions of the Cervix: An Integrated Cytologic and Histologic Approach, United States and Canadian Academy of Pathology, Baltimore, Maryland, March 2013

Invited Speaker, Current Issues in Surgical Pathology, University of Texas Southwestern, Dallas, Texas, April 2013

Invited Speaker, British Association of Gynecological Pathologists, 10th Annual Meeting, London, United Kingdom, June 2013

Consensus Group, Tumors of the Female Genital Tract, World Health Organization, Lyon, France, June 2013

Lecturer, Endometrial Carcinoma: Diagnosis and Histologic Subtypes, Kaiser Southern California Webinar, August 2013

Lecturer, Inflammatory Bowel Disease and the Diagnosis of Dysplasia, Kaiser Northern California Webinar, August 2013

Lecturer, Endometrial Carcinoma: Diagnosis and Histologic Subtypes, Kaiser Northern California Webinar, September 2013

Visiting Professor, University of Hawaii, Honolulu, Hawaii, August 2013

Invited Speaker, Hawaii Society of Pathology, Honolulu, Hawaii, August 2013

Short Course, American Society for Clinical Pathology, Chicago, Illinois, September 2013

Invited Lecturer, Ohio State University Pathology Update, Columbus Ohio, October 2013

Short Course, College of American Pathologists, Orlando, Florida, October 2013

Invited Lecturer, Brazilian Society of Pathology, 29th Congress, Florianopolis, Brazil, November 2013

Invited Lecturer, Ovarian Serous Borderline Tumors & Low-Grade Serous Carcinoma, Kaiser Northern California Webinar, November 2013

Lecturer, Pancreatic Cystic Lesions, Kaiser Northern California Webinar, December 2013

Short Course, Surgical Pathology of the Female Genital Tract in Pregnancy, California Society

of Pathologists Annual Seminar, San Francisco, California, December 2013

Invited Lecturer, Ovarian Serous Borderline Tumors & Low-Grade Serous Carcinoma, Kaiser Southern California Webinar, January 2014.

Invited Speaker, Molecular Medicine Tri Conference, Moscone Convention Center, San Francisco, California, February 2014

Invited Lecturer, Annual Gynecologic Pathology/Oncology Conference, Detroit, Michigan, February 2014

Faculty, Short Course, Glandular Lesions of the Cervix: An Integrated Cytologic and Histologic Approach, United States and Canadian Academy of Pathology, San Diego, California, March 2014

Faculty, Short Course, Hereditary Gynecologic Cancer Syndromes, United States and Canadian Academy of Pathology, San Diego, California, March 2014

Panelist, Hot Topics in Gynecological Pathology, United States and Canadian Academy of Pathology, San Diego, California, March 2014

Invited Lecturer, USCAP Practical Pathology Seminar, 2014, New York, New York, May 2014

Presidential Guest Lecture, Western Association of Gynecologic Oncologists, Tahoe, California, June 2014

Invited Lecturer, Florida Society of Pathologists, Palm Beach, Florida, July 2014

Faculty, Short Course, College of American Pathologists, Chicago, Illinois, September 2014

Visiting Professor, Birmingham, England, September 2014

Co-Chair and Invited Lecturer, Updates on Vulvar and Anal Pathology, International Academy of Pathology, Bangkok, Thailand, October 2014

Short Course, Endocervical Adenocarcinoma: An Integrative Cytologic and Histologic Approach, California Society of Pathologists Annual Seminar, San Francisco, California, December 2014

Grand Rounds, New York University, New York City, New York, December 2014

Faculty, Short Course, Hereditary Gynecologic Cancer Syndromes, United States and Canadian Academy of Pathology, Boston, Massachusetts, March 2015

Invited Speaker, International Society of Gynecological Pathologists: Vulvar and Anal Intraepithelial neoplasia. Diagnosis, Nomenclature and Ancillary Studies, United States and

Canadian Academy of Pathology, Boston, Massachusetts, March 2015

Invited Speaker, Gynecological Pathology Evening Panel, United States and Canadian Academy of Pathology, Boston, Massachusetts, March 2015

Invited Speaker, Association of Directors of Anatomic and Surgical Pathology, Boston, Massachusetts, March 2015

Invited Lecturer, Endocervical Glandular Lesions: Histology, Kaiser Northern California Webinar, April 2015

Guest Lecturer, Houston Society of Clinical Pathology Spring Seminar, Houston, Texas, April 2015

William T Hill Lectureship, Department of Pathology, Baylor College of Medicine, Houston, Texas, April, 2015

Invited Lecturer, Scientific Symposiums International, Celebrating the Illustrious Career of Dr. Richard L. Kempson: Surgical Pathology of the Breast, Female Genital Tract, Head & Neck and Lung, Big Island of Hawaii, July 2015

Invited Lecturer, American Society of Clinical Pathology, Pathology Update: State-of-the-Art Diagnostic Surgical Pathology, Las Vegas, Nevada, July 2015

Invited Lecturer, Pacific Northwest Society of Pathologists, Vancouver, British Columbia, Canada, September 2015.

Faculty, Short Course, American Society of Clinical Pathologists, Long Beach, California, October 2015

Faculty, Short Course, College of American Pathologists, Nashville, Tennessee, October 2015

Grand Rounds, Weill Cornell Medical Center, New York, New York, November 2015

Invited Lecturer, Gynaecological Pathology – Putting Virtual Microscopy to the Test, The Royal College of Physicians, London, UK, January 2016

Invited Lecturer, MUSC Pathology Symposia, Charlottesville, South Carolina, February 2016.

Faculty, Short Course, Hereditary Gynecologic Cancer Syndromes, United States and Canadian Academy of Pathology, Seattle, Washington, March 2016

Presenter, Mismatch Repair Protein and Microsatellite Instability Testing in Gynecologic Cancer, Biomarkers in Endometrial Cancer Subcommittee, International Society of Gynecologic Pathologists, United States and Canadian Academy of Pathology, Seattle, Washington, March

2016

Key Note Speaker, Lynch Syndrome Testing in the Female Genital Tract, Berlin, Germany, May 2016.

Grand Rounds Speaker, Lynch Syndrome in the Female Genital Tract: Diagnostic Tests and Pitfalls, University of Tubingen, Tubingen, Germany, May 2016.

Invited Lecturer, American Society of Clinical Pathology, Pathology Update, Washington, DC, July 2016

Organizer, Scientific Symposiums International, 2nd Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter: Surgical Pathology and Cytopathology of the GI and GU Tracts, Kauai, Hawaii, July 2016

Speaker, Consultations in Anal and Perianal Pathology…And You Thought Colitis Was a Pain in the…, Scientific Symposiums International, 2nd Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter: Surgical Pathology and Cytopathology of the GI and GU Tracts, Kauai, Hawaii, July 2016

Speaker, What if it's Not 'Jist' a GIST? Scientific Symposiums International, 2nd Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter: Surgical Pathology and Cytopathology of the GI and GU Tracts, Kauai, Hawaii, July 2016

Speaker, Diarrhea and Belly Pain: The Not So Usual Suspects, Scientific Symposiums International, 2nd Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter: Surgical Pathology and Cytopathology of the GI and GU Tracts, Kauai, Hawaii, July 2016

Speaker, The Survivor's Guide to Appendiceal Mucinous Tumors, Scientific Symposiums International, 2nd Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter: Surgical Pathology and Cytopathology of the GI and GU Tracts, Kauai, Hawaii, July 2016

Speaker, Caring for Carcinoid: The Problem Cases, Scientific Symposiums International, 2nd Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter: Surgical Pathology and Cytopathology of the GI and GU Tract, Kauai, Hawaii, July 2016

Visiting Professor, University of Hawaii, Honolulu, Hawaii, July 2016.

Invited Speaker, Hawaii Society of Pathology, Honolulu, Hawaii, July 2016

Invited Lecturer, Endometrial Hyperplasia: Pre- and Post-Treatment, Kaiser Northern California Webinar, August 2016.

Invited Speaker, Update on Endometrial Cancer Biomarker Testing, Cancer Biomarkers Conference, Houston Methodist Department of Pathology, Houston, Texas, September 2016

Faculty, Short Course: The Role of the Second Opinion in Surgical Pathology: Just the FAQs Ma'am. American Society of Clinical Pathology, Las Vegas, Nevada, September 2016

Faculty, Short Course: Pancreatic Quandaries: How to Handle Small Specimens – A Cytologic/Histologic Approach, American Society of Clinical Pathology, Las Vegas, Nevada, September 2016

Faculty, Short Course: Pseudoneoplastic Lesions and Mimic in the Endometrium: Navigating a Potentially Treacherous Landscape, American Society of Clinical Pathology Las Vegas, Nevada, September 2016

Arthur Purdy Stout Lecturer, Lynch Screening in the Female Genital Tract: Where Are We Now & Where Are We Headed, American Society of Clinical Pathology, Las Vegas, Nevada September 2016

Invited Speaker, Challenging Cases in Surgical Pathology, XXXI International Congress of the International Academy of Pathology & 28th Congress of the European Society of Pathology, Cologne, Germany, September 2016

Plenary Lecture, Frontiers in Pathology, University of Michigan, Ann Arbor, Michigan, October 2016

Invited Speaker, South Carolina Surgical Pathology Conference, Greenville, South Carolina, November 2016

Keynote Speaker, Melbourne Gynecologic Pathology Seminar, Melbourne, Australia, November 2016

Invited Short Course Lecturer, Uterine Mesenchymal Lesions, California Society of Pathologists Annual Seminar, San Francisco, California, December 2016

Invited Speaker: Arthur Purdy Stout Society, United States and Canadian Academy of Pathology, San Antonio, Texas, March 2017

William M. Shelley Memorial Lecture, John Hopkins Department of Pathology, John Hopkins Medical School, Baltimore, Maryland, April 2017

Organizer & Speaker, Scientific Symposiums International, 3rd Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter: The Next Generation. Surgical Pathology of the Breast, GI and GYN Tracts, Maui, Hawaii, July 2017

Invited Lecturer, American Society of Clinical Pathology, Pathology Update, Las Vegas,

Nevada, July 2017

Invited Lecturer, Austrian Society of Pathology, Velden, Austria, September 2017

Invited Faculty, Mesenchymal Lesions of the Uterus, USCAP Interactive Learning Center, Palm Springs, California, September 2017.

Invited Speaker, Pathology Research Lecture Series, University of California, San Diego, San Diego, California, February 2018.

Invited Speaker, Napa Valley Pathology Conference, Napa, California, May 2018

Invited Speaker, Great Lakes Pathology Conference – Traverse City, Michigan, June 2018

Organizer, Scientific Symposiums International, 4th Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter: Timely Updates in Lung, Head & Neck, & Skin, Maui, Hawaii, July 2018

Invited Speaker, Hawaii Society of Pathology, Honolulu, Hawaii, July 2018

Invited Lecturer, Gynecologic Tract Frozen Section Diagnoses, Kaiser Northern California Webinar, August 2018

Invited Speaker, Third Cancer Biomarker Conference (CBCIII), Houston Methodist Research Institute Auditorium, September 2018

Invited Faculty, Mesenchymal Lesions of the Female Gynecologic Tract, USCAP Interactive Learning Center, Palm Springs, California, September 2018.

Short Course, Serous Epithelial Tumors in the Female Genital Tract. College of American Pathologists, Chicago, Illinois, October 2018

Short Course, Endocervical Carcinoma. College of American Pathologists, Chicago, Illinois, October 2018

Invited Speaker, Hawaii Pathology Conference, Maui, Hawaii, October 2018

Invited Speaker, Arab Division of the International Academy of Pathology, The XXXII Congress of the International Academy of Pathology, King Hussein Bin Talal Convention Centre, Dead Sea, Jordan, October 2018.

Invited Speaker, Pathology Societies Federation of Turkey, Ankara, Turkey, October 2018

Invited Speaker, Arizona Society of Pathology, Phoenix, Arizona, November 2018

Squamous Lesions of the Lower Female Genital Tract, On Demand Webcast for the American Society of Clinical Pathologists, November 2018

Invited Speaker, Saturday Case Seminar, California Society of Pathologists Annual Seminar, San Francisco, California, December 2018.

Invited Faculty, Mighty Women of Pathology: Update in Surgical Pathology, Maui, Hawaii, January 2019.

Invited Speaker, Diagnostic Advances in Surgical Pathology and Cytopathology, University of San Diego, San Diego, California, April 2019

Invited Speaker, British Association of Gynaecological Pathologists Annual Meeting, London, England, June 2019

Organizer and Speaker, Scientific Symposiums International, 5th Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter, Kona, Hawaii, July 2019

Invited Speaker, Colorado Society of Clinical Pathologists, Stars in the Mountains, Vail, Colorado, July 2019

Grand Rounds Speaker, Oregon Health Science University, Portland, Oregon, September 2019

Invited Speaker, DICER Syndrome, 31st European Congress of Pathology, Nice, France, September 2019

Invited Faculty, Mesenchymal Lesions of the Female Gynecologic Tract, USCAP Interactive Learning Center, Palm Springs, California, September 2019

Invited Speaker, Midwestern Pathology Conference, October 2019

Invited Speaker, Cancer Biomarkers Conference IV, Saddleback, New Jersey, October 2019

Invited Speaker, 11th Asia Pacific IAP Congress, Hefei, Anhui province, China, October 2019

Invited Faculty, Mesenchymal Lesions of the Gastrointestinal Tract, USCAP Interactive Learning Center, Palm Springs, California, October 2019

Short Course, Serous Epithelial Tumors in the Female Genital Tract. College of American Pathologists, Orlando, Florida, October 2019

Short Course, Endocervical Carcinoma. College of American Pathologists, Orlando, Florida, October 2019

Guest Speaker, John Hopkins Continuing Education Course, Baltimore, Maryland, October 2019

Invited Speaker, Pacific Northwest Society of Pathology, Portland, Oregon, October 2019

Invited Speaker, British Division of the International Academy of Pathology, London, England, November 2019

Short Course, Ovarian Epithelial Tumors: New Developments. California Society of Pathologists, San Francisco, California, December 2019

Invited Speaker, Gastrointestinal Pathology Society, USCAP, Los Angeles, California, March 2020

Short Course, Serous Epithelial Tumors in the Female Genital Tract. College of American Pathologists, October 2020

Short Course, Endocervical Carcinoma. College of American Pathologists, October 2020

Invited Speaker, Indiana Association of Pathologists, Indianapolis, Indiana, May 2021.

Invited Speaker, International Society of Gynecologic Pathologists, May 2021

Invited Speaker, Colorado Society of Clinical Pathologists, Stars in the Mountains, Vail, Colorado, July 2021

Organizer and Speaker, Scientific Symposiums International, 6th Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter, Kona Hawaii, July 2021

Invited Speaker, Cancer Biomarkers Conference V, Biomarkers in Gynecologic Malignancies: Established & Emerging, Jackson, Mississippi, September 2021

Course Director and Faculty, College of American Pathologists, Gynecologic Pathology Full Day Course, Chicago, Illinois, September 2021

Invited Faculty, Gynecologic Pathology: Navigating Histologic Mimics and other Diagnostic Pitfalls, USCAP Interactive Learning Center, Palm Springs, California, October 2021

Invited Faculty, Arthur Purdy Stout Society, USCAP Interactive Learning Center, Palm Springs, California, October 2021

Invited Speaker, California Society of Pathologists, San Francisco, California, December 2021

Guest Speaker, Mayo Clinic Surgical Pathology Update, Phoenix, Arizona, January 2022.

Guest Speaker, Canadian Anatomic and Molecular Pathology Conference, May 2022.

Organizer and Speaker, Scientific Symposiums International, 7th Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter, Kona, Hawaii, July 2022.

Invited Speaker, International Society of Gynecologic Pathologists, November 2022

Invited Speaker, California Society of Pathologists, San Francisco, California, December 2022

Invited Speaker, International Society of Gynecologic Pathologists, New Orleans, Louisiana March 2023

Organizer and Speaker, Scientific Symposiums International, 8th Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter, Kona, Hawaii, July 2023

Invited Speaker, Gastrointestinal Pathology, American Society of Clinical Pathologists, Long Beach, California, October, 2023

Invited Speaker, Mismatch Repair Analysis in Neoplasms, Kaiser Webinar, November, 2023

Invited Speaker, Florida Society of Pathologists, Florida Society of Pathologists 50th Annual Pathology Conference, Orlando, Florida, February 16-18, 2024.

Invited Speaker, USCAP and ISGYP Co-branded Interactive Microscopy Course, Palm Springs, California, February 21-24, 2024

Invited Speaker, 65th Annual South Bay Pathology Society Spring Meeting, Menlo Park, California, April, 2024

Invited Speaker, The 16th Annual World Cancer Congress, Budapest, Hungary, June 2024.

Invited Speaker, Colorado Society of Clinical Pathologists, Stars in the Mountains, Vail, Colorado, July 2024

Organizer and Speaker, Scientific Symposiums International, 9th Annual Dr. Richard L. Kempson Diagnostic Pathology Course: Making Diagnoses That Matter, Kona, Hawaii, July 2024

Invited Speaker, Montana Pathologists Society Annual Meeting, Bozeman, Montana, September 2024

Invited Speaker, Luminaries in Pathology, United States and Canadian Academy of Pathology, Boston, Massachusetts, March 2025

PEER-REVIEWED JOURNAL ARTICLES

1. **Longacre TA**, Bartow SA: A correlative morphologic study of breast and endometrium in the menstrual cycle. Am J Surg Pathol 1986; 10: 382-393.

2. **Longacre TA**, Foucar K, Crago S, Chen I-M, Griffith B, Dressler L, McConnell TS, Duncan M, Gribb J: Hematogones: A multiparameter analysis of bone marrow precursor cells. Blood 1989; 73:543-552.

3. **Longacre T**, Foucar K, Koster F, Burgdorf W: Atypical cutaneous lymphoproliferative disorder resembling mycosis fungoides in AIDS: Report of a case with concurrent Kaposi's sarcoma. A J Dermatopathol 1989; 11:451-456.

4. **Longacre TA**, Listrom MB, Spigel JH, Willman CL, Dressler L, Clark D: Aggressive jejunal lymphoma of large granular lymphocytes: Immunohistochemical, ultrastructural, molecular and DNA content analysis. Am J Clin Pathol 1990; 93:124-132.

5. **Longacre TA**, Fenoglio-Preiser CM: Mixed hyperplastic adenomatous polyps/serrated adenomas: A distinct form of colorectal neoplasia. Am J Surg Pathol 1990; 14:524-537.

6. Willman CL, Stewart CC, **Longacre TA**, Head DR, Habbersett R, Ziegler SF, Perlmutter RM: Expression of the c-fgr and hck protein-tyrosine kinases in acute myeloid leukemic blasts is associated with early commitment and differentiation events in the monocytic and granulocytic lineages. Blood 1991; 77:726-734.

7. Smoller BR, **Longacre TA**, Warnke RA: Ki-1 (CD30) expression in differentiation of lymphomatoid papulosis from arthropod bite reactions. Modern Pathology 1992; 5:492-496.

8. **Longacre TA**, Smoller BR: Leukemia cutis. Analysis of 50 biopsy-proven cases with emphasis on occurrence in myelodysplastic syndromes. Am J Clin Pathol 1993; 100:276-284.

9. **Longacre TA,** Smoller BR, Rouse RV: Atypical fibroxanthoma: Multiple immunohistologic profiles. Am J Surg Pathol 1993; 17:1199-1209.

10. Davis RE, **Longacre TA**, Cornbleet PJ: Hematogones in the bone marrow of adults: Immunophenotypic features, clinical settings and differential diagnosis. Am J Clin Pathol, 1994; 102:202-211.

11. **Longacre TA**, Chung MH, Jensen DN, Hendrickson MR: Proposed criteria for the diagnosis of well differentiated endometrial carcinoma: a diagnostic test for myoinvasion. Am J Surg Pathol, 1995; 19:371-406.

12. Wallace ML, **Longacre TA**, Smoller BR: Estrogen and progesterone receptors and BRST-2 fail to distinguish metastatic breast carcinoma from eccrine neoplasms. Modern Pathol, 1995; 8:897-901.

13. Rouse RV, Soetikno RM, Baker RJ, Barnard IC, Triadafilopoulos G, **Longacre TA**:

Esophageal submucosal gland duct adenoma. Am J Surg Pathol, 1995; 19:1191-1196.

14. O'Hanlan K, Kargas S, Schreiber M, Hendrickson M, **Longacre T**, Burrs D: Ovarian carcinoma metastases to gastrointestinal tract appear to spread like colon carcinoma to mesenteric lymph nodes: Implications for surgical resection. Gynecol Oncol, 1995; 59:200-206.

15. **Longacre TA**, Chung MH, Rouse RV, Hendrickson MR: Atypical polypoid adenomyofibromas (atypical polypoid adenomyomas) of the uterus. A clinicopathologic study of 55 cases. Am J Surg Pathol, 1996; 20:1-20.

16. Soslow RA, Chung MH, Rouse RV, Hendrickson MR, **Longacre TA**: Atypical polypoid adenomyofibroma (APA) versus well differentiated endometrial carcinoma with prominent stromal matrix: an immunohistochemical study. Int J Gynecol Pathol, 1996; 15:209-216.

17. **Longacre TA**, O'Hanlan K, Hendrickson, MR: Adenoid cystic carcinoma of the submandibular gland with symptomatic ovarian metastases. Int J Gynecol Pathol, 1996; 15:349-355.

18. Soslow RA, Rouse RV, Hendrickson MR, Silva EG, **Longacre TA**: Transitional cell neoplasms of the ovary and urinary bladder: a comparative immunohistochemical analysis. Int J Gynecol Pathol, 1996; 15:257-265.

19. **Longacre TA**, Egbert B, Rouse RV: Desmoplastic malignant melanoma: an immunohistochemical study. Am J Surg Pathol, 1996; 20:1489-1500.

20. **Longacre TA**, Hendrickson MR, Kapp DS, Teng NH: Lymphangioleiomyomatosis of the uterus simulating high stage endometrial stromal sarcoma. Gynecol Oncol, 1996; 63:404-410.

21. Johnson LA, **Longacre TA**, Wharton KA, Jeffrey RB: Multiple mesenteric lymphatic cysts: an unusual feature of mesenteric panniculitis (sclerosing mesenteritis). J Computer Assisted Tomography, 1997; 21:103-105.

22. Hildebrandt RH, Rouse RV, **Longacre TA**: Value of inhibin in the identification of granulosa cell tumors of the ovary. Hum Pathol, 1997; 28:1387-1395.

23. Ditkoff EC, Tucker T, Levine RU, Lindheim SR, Sauer MV, **Longacre T**. Bilateral serous cystadenofibromas clinically simulating hyerreactio luteinalis following controlled ovarian hyperstimulation and in vitro fertilization. Journal of Assisted Reproduction and Genetics, 1997; 14:230-233.

24. Poen JC, Collins HL, Niederhuber JE, Oberhelman HA, Vierra MA, Bastidas AJ, Young HS, Slosberg EA, Jeffrey BR, **Longacre TA**, Fisher GA, Goffinet DR. Chemo-radiotherapy for localized pancreatic cancer: increased dose intensity and reduced acute toxicity with concomitant radiotherapy and protracted venous infusion 5-fluorouracil. Int J Radiat Oncol Biol Phys, 1998; 40:93-99.

25. Kresch A, **Longacre T**, Foste JR, Lotze EC, Westland A, Miller G, Savage G. Initial experience with a physiologic morcellating resectoscope. J Am Assoc Gynecol Laparosc, 1998; 5:419-421.

26. **Longacre TA**, Hendrickson, MR. Diffusely infiltrative endometrial adenocarcinoma: an adenoma malignum pattern of myoinvasion. Am J Surg Pathol, 1999; 23:69-78.

27. Baker RJ, Hildebrandt RH, Rouse RV, Hendrickson, MR, **Longacre TA**. Uterine tumors with sex cord stromal differentiation: Evidence for true sex cord differentiation. Hum Pathol, 1999;30(6):671-679.

28. Ramos PC, Kapp DS, **Longacre TA**, Teng NN. Malignant granular cell tumor of the vulva in a seventeen-year-old: Case report and literature review. Int J Gynecol Cancer, 2000; 10:429-434.

29. Shibata A, **Longacre TA**, Puligandla B, Parsonnet J, Habel LA. Histologic classification of gastric adenocarcinoma for epidemiologic research: concordance between pathologists. Cancer Epidemiology, Biomarkers and Prevention, 2001; 10:75-78.

30. Shibata A, Parsonnet J, **Longacre TA**, Garcia MI, Puligandla B, Davis RE, Vogelman JH, Orentreich N, Habel LA. CagA status of Helicobacter pylori infection and p53 gene mutations in gastric adenocarcinoma. Carcinogenesis, 2002; 23:419-424.

31. Schaner ME, Ross DT, Ciaravino G, Sørlie T, Troyanskaya O, Diehn M, Wang YC, Duran GE, Sikic TL, Caldeira S, Skomedal H, Tu IP, Hernandez-Boussard T, Johnson SW, O'Dwyer PJ, Fero MJ, Kristensen GB, Børresen-Dale AL, Hastie T, Tibshirani R, van de Rijn M, Teng NN, **Longacre TA**, Botstein D, Brown PO, Sikic BI. Gene expression patterns in ovarian carcinomas. Mol Biol Cell, 2003; 14:4376-4386.

32. Kambham N, Vij R, Cartwright CA, **Longacre TA**. Cytomegalovirus infection in steroid-refractory ulcerative colitis: a case-control study. Am J Surg Pathol, 2004; 28:365-73.

33. Juretzka MM, Jensen KC, **Longacre TA**, Teng NN, Husain A. Detection of pelvic lymph node micrometastasis in stage IA2-IB2 cervical cancer by immunohistochemical analysis. Gynecol Oncol, 2004; 93:107-111.

34. Schwartz E, **Longacre TA**. Adenomatoid tumors of the female and male genital tract express WT1. Int J Gynecol Pathol, 2004; 23:123-128.

35. Woo MMM, Gilks CB, Verhage HG, **Longacre TA**, Leung PC, Auersperg N. Oviductal glycoprotein, a new differentiation-based indicator present in early ovarian epithelial neoplasia and cortical inclusion cysts. Gynecol Oncol, 2004; 93:315-319.

36. Bell DA, **Longacre TA**, Prat J, Kohn EC, Soslow RA, Ellenson LH, Malpica A, Stoler MH, Kurman RJ. Serous borderline (low malignant potential, atypical proliferative) ovarian tumors: workshop perspectives. Hum Pathol, 2004; 35:934-948.

37. **Longacre TA**, McKenney JK, Tazelaar HD, Kempson RL, Hendrickson MR. Ovarian serous tumors of low malignant potential (borderline tumors): Outcome-based study of 276 patients with long term (≥5 year) follow-up. Am J Surg Pathol, 2005; 29:707-723.

38. Gilks B, Vanderhyden B, Zhu S, van de Rijn M, **Longacre TA**. Distinction between serous tumors of low malignant potential and serous carcinomas based on mRNA expression profiling. Gyn Oncol, 2005; 96:684-694.

39. Suriano G, Yew S, Ferreira P, Senz J, Kaurah P, Ford JM, **Longacre TA**, Norton JA, Chun N, Young S, Olveira MJ, MacGillivray B, Rao A, Sears D, Jackson CE, Boyd J, Yee C, Deters C, Pai GS, Hammond LS, McGivern BJ, Medgyesy D, Sartz D, Arun B, Oelschlager BK, Upton MP, Neufeld-Kaiser W, Silva OE, Donenberg TR, Kooby DA, Sharma S, Jonsson BA, Gronberg H, Gallinger S, Seruca R, Lynch H, Huntsman DG. Characterization of a recurrent germ line mutation of the e-cadherin gene: implications for genetic testing and clinical management. Clin Cancer Res 2005; 11:5401-5409.

40. Randolph ML, **Longacre TA**, Gerson L. Acute colitis secondary to self-administered alcohol enemas: a mimic of ischemic colitis. J Clin Gastroenterol, 2005;39:78-79.

41. Kambham N, Troxell M, **Longacre TA**. Multinucleated epithelial giant cells in colorectal polyps: A clinicopathologic study of 23 cases. Am J Surg Pathol, 2005;29:912-919.

42. McKenney JK, Kong, CS, **Longacre TA**. Endometrial adenocarcinoma associated with subtle lymph-vascular space invasion and lymph node metastasis: a histologic pattern mimicking intravascular and sinusoidal histiocytes. Int J Gynecol Pathol, 2005;24:73-38.

43. **Longacre TA**, Bane A, Bleiweiss I, Carter B, Catelano E, Ennis M, Hendrickson MR, Hibshoosh H, Layfield L, Memeo L, Quenneville L, Venter DJ, Wu H, O'Malley FPO. Interobserver agreement and reproducibility in diagnosis and classification of invasive carcinoma of the breast: results of the National Cancer Institute (NCI) Familial Registry Breast Cancer Pathology Working Group. Mod Pathol, 2006;19:195-207.

44. Brown LA, Irving J, Parker R, Kim H, Press JZ, **Longacre TA**, Magliocco A, Makretsov N, Gilks B, Pollack J, Huntsman D. Amplification of EMSY, a novel oncogene on 11q13 in high grade ovarian surface epithelial carcinomas. Gynecol Oncol, 2006;100:264-270.

45. Kambham N, Kong C, **Longacre TA**, Natkunam Y. Utility of syndecan-1 (CD138) expression in the diagnosis of undifferentiated neoplasms: a tissue microaaray study of 1,754 cases. Appl Immunohistochem Mol Morphol, 2005;13:304-310.

46. McKenney JK, Balzer BL, **Longacre TA**. Lymph node involvement in ovarian serous tumors of low malignant potential (borderline tumors): pathology, prognosis and proposed classification. Am J Surg Pathol, 2006;30:614-624.

47. Krishnan C, **Longacre TA**. Ductal carcinoma in situ of the breast with osteoclast-like giant cells. Hum Pathol, 2006;37:369-372.

48. Hamilton CA, Cheung MK, Osann K, Chen LM, Teng NN, **Longacre TA**, Powell MA, Hendrickson MR, Kapp DS, Chan JK. Uterine papillary serous and clear cell carcinomas predict for poorer survival compared to grade 3 endometrioid corpus cancers. Br J Cancer, 2006;13:642-646.

49. Liou W-S, Hamilton C, Cheung MK, Osann K, **Longacre TA**, Teng NN, Husain A, Dirbas FM, Chan JK. Outcomes of women with metachronous breast and ovarian carcinomas. Gynecol Oncol, 2006; 103:190-194.

50. McKenney JM, Balzer BL, **Longacre TA**. Patterns of stromal invasion in ovarian serous tumors of low malignant potential (borderline tumors): A re-evaluation of the concept of stromal microinvasion. Am J Surg Pathol, 2006;30:1209-1221.

51. Bane A, Beck JC, Bleiweiss I, Buys SS, Catalano E, Daly MB, Giles G, Godwin A, Hisbshoosh H, Hopper JL, John EM, Layfield L, **Longacre TA**, Miron A, Senie R, Southey MC, West DW, Whittemore AS, Wu H, Andrulis IL, O'Malley FP. BRCA2 mutation-associated breast cancers exhibit a distinguishing phenotype based on morphology and molecular profiles from tissue microarrays. Am J Surg Pathol, 2007; 31:121-128.

52. Kong CS, Balzer BL, Troxell ML, Patterson BK, **Longacre TA**. $p16^{INK4A}$ immunohistochemistry is superior to HPV in situ hybridization for the detection of high risk HPV in cervical dysplasia. Am J Surg Pathol, 2007; 31:33-43.

53. Norton JA, Ham CM, Van Dam J, Jeffrey RB, **Longacre TA**, Hunstman DG, Chen N, Kurian AW, Ford JM. CDH1 truncating mutations in the E-cadherin gene: an indication for total gastrectomy to treat hereditary diffuse gastric cancer. Ann Surg, 2007; 245:873-879.

54. Roost J, Mai H, **Longacre TA**, Van Dam J. Endoscopic mucosal resection of a solitary gastric plasmacytoma. Digestive Endoscopy, 2007; 19:139-141.

55. Kong CS, Welton ML, **Longacre TA**. Role of human papilloma virus in squamous cell metaplasia-dysyplasia-carcinoma of the rectum. Am J Surg Pathol, 2007; 31:919-925.

56. Ota T, Gilks CB, **Longacre TA**, Leung PCK, Auersperg N. HOXA7 in epithelial ovarian cancer: interrelationships between differentiation and clinical features. Reprod Sci, 2007;14:605-614.

57. Quiros JA, Van Dam J, **Longacre TA**, Banerjee S. Gastric pyogenic granuloma. Gastroenterol Hepatology, 2007; 3:850-855.

58. Wang Y, Ikeda DM, Narasimhan B, **Longacre TA**, Bleicher RJ, Pal S, Jackman RJ, Jeffrey SS. Estrogen receptor negative invasive breast cancer: imaging features of tumors with and

without HER2 overexpression. Radiology, 2008; 246:367-375.

59. Sangoi AR, Soslow RA, Teng NN, **Longacre TA**. Ovarian clear cell carcinoma with papillary features: a potential mimic of serous tumor of low malignant potential. Am J Surg Pathol, 2008; 32:269-274.

60. Sangoi AR, McKenney JK, Dadras SS, **Longacre TA**. Lymphatic vessel invasion in ovarian serous tumors of low malignant potential with stromal microinvasion: a case control study. Am J Surg Pathol, 2008; 32:261-268.

61. Han G, Gilks CB, Leung S, Ewanowich CA, Irving JA, **Longacre TA**, Soslow RA. Mixed ovarian epithelial carcinomas with clear cell and serous components are variants of high-grade serous carcinoma: an interobserver correlative and immunohistochemical study of 32 cases. Am J Surg Pathol, 32:955-964.

62. Esheba GE, Pate LL, **Longacre TA**. Oncofetal protein glypican-3 distinguishes yolk sac tumor from clear cell carcinoma of the ovary. Am J Surg Pathol, 2008; 32:600-607.

63. McKenney JK, Soslow RA, **Longacre TA**. Mucinous epithelial neoplasms associated with mature ovarian teratomas: a clinicopathologic study of 42 cases emphasizing morphologic heterogeneity and associated pseudomyxoma peritonei. Am J Surg Pathol, 2008; 32:645-655.

64. McKenney JK, Soslow RA, **Longacre TA**. Low grade mucinous epithelial neoplasm (intestinal type) arising in a mature sacrococcygeal teratoma with late recurrence as pseudomyxoma peritonei. Hum Pathol, 2008; 39:629-632.

65. Gütgemann I, Lehman NL, Jackson PK, **Longacre TA**. Emi1 protein accumulation implicates misregulation of the anaphase promoting complex/cyclosome (APC/C) pathway in ovarian clear cell carcinoma. Mod Pathol, 2008; 21:445-454.

66. Rogers WM, Dobo E, Norton JA, Van Dam J, Hunstman DG, Chun N, Ford JM, **Longacre TA**. Risk-reducing total gastrectomy for truncating mutations in the E-cadherin gene: new pathologic findings with clinical implications. Am J Surg Pathol, 2008; 32:799-809.

67. Jensen KC, Mariappan R, Putcha GV, Schrijver I, Chun N, Ford JM, **Longacre TA**. Microsatellite instability in ovarian epithelial tumors in women 50 years of age and younger: a molecular and immunohistochemical analysis. Am J Surg Pathol, 2008; 32:1029-1037.

68**.** Esheba GE, Atkins KA, **Longacre TA**, Higgins JP. Expression of the urothelial differentiation markers GATA3 and placental S100 (S100P) in female genital tract transitional cell proliferations. Am J Surg Pathol, 2009; 33:347-353.

69. Sangoi AR, Rogers WM, **Longacre TA**, Baron EJ, Montoya JG, Banaei N. Challenges and pitfalls of morphologic identification of fungal infections in histology and cytology specimens: a ten-year retrospective review at a single institution. Am J Clin Pathol 2009; 131:364-75.

70. Burtelow MA, **Longacre TA.** Utility of microtubule associated protein-2 (MAP-2) for identification of ganglion cells in rectal suction biopsies. Am J Surg Pathol. 2009;33:1025-30.

71. Lavie O, **Longacre T**, Segev Y, Husain A. Ovarian carcinosarcomas associated with prolonged use of tamoxifen. Int J Gynecol Cancer 2009; 19:1521-1523.

72. Fuentebella J, Bass D, **Longacre T**, Ro K. Abdominal pain, gastrointestinal bleeding and weight loss in a 17 year old male. Dig Dis and Sci 2009; 54:722-724.

73. Callacondo-Riva D, Ganoza-Salas A, Anicama-Lima W, Quispe-Mauricio A, **Longacre TA**. Primary squamous cell carcinoma of the stomach with paraneoplastic leukocytosis: case report and review of the literature. Hum Pathol. 2009;40:1494-98.

74. Pai RK, Beck AH, Norton JA, **Longacre TA.** Appendiceal mucinous neoplasms: clinicopathologic study of 116 cases with analysis of factors predicting recurrence. Am J Surg Pathol. 2009;33:1425-39.

75. Rosing JH, Jeffrey B, **Longacre TA**, Greco R. Massive extra-adrenal retroperitoneal paraganglioma: pre-operative embolization and resection. Dig Dis Sci. 2009;54:1621-24.

76. Sangoi AR, McKenney JK, Schwartz EJ, Rouse RV, **Longacre TA**. Adenomatoid tumors of the female and male genital tracts: a clinicopathological and immunohistochemical study of 44 cases. Mod Pathol. 2009; 22:1228-35.

77. Nicholas CR, Haston KM, Grewall AK, **Longacre TA**, Pera RA. Transplantation directs oocyte maturation from embryonic stem cells and provides a therapeutic strategy for female infertility. Hum Mol Genet. 2009;18:4376-89.

78. Talisetti A, **Longacre T**, Pai RK, Kerner J. Diversion colitis in a 19-year-old female with megacystis-microcolon-intestinal hypoperistalsis syndrome. Dig Dis Sci. 2009;54:2338-40.

79. Kong CS, Beck AH, **Longacre TA**. A panel of three markers including p16, ProEx C, or HPV ISH is optimal for distinguishing between primary endometrial and endocervical adenocarcinomas Am J Surg Pathol. 2010;34:915-26.

80. Rankin EB, Fuh K, Ms. Taylor T, Krieg A, Musser M, Yuan J, Wei K, Kuo C, **Longacre T**, Giaccia A. AXL is an essential factor and therapeutic target for metastatic ovarian cancer. Cancer Res 2010;70:7570-9.

81. Fujiwara M, **Longacre TA**. Low grade mucinous adenocarcinoma of the uterine corpus: a rare and deceptively bland form of endometrial carcinoma. Am J Surg Pathol, 2011; 35:537-44.

82. Mills A, Karamanchandami JR, Vogel H, **Longacre TA**. Endocervical fibroblastic malignant peripheral nerve sheath tumor (neurofibrosarcoma): report of a novel entity possibly related to endocervical CD34 fibrocytes. Am J Surg Pathol, 2011;35:404-12.

83. Liu YL, Brown SS, Elihu A, Bonham CA, Conception W, **Longacre TA**, Kamaya A. Hepatic epithelioid hemangioendothelioma. Dig Dis Sci, 2011; 56:303-306.

84. Sharaf RN, Levesque BG, Shah S, **Longacre T**, Pasricha PJ. Capsule endoscopy in the diagnosis of suspected small bowel involvement with Crohn's disease. Dig Dis Sci. 2011;56:46-8.

85. Mojtahed A, Schrijver I, Ford JM, **Longacre TA**, Pai RK. A 2-antibody mismatch repair protein immunohistochemistry screening approach for colorectal carcinomas, skin sebaceous tumors and gynecologic tract carcinomas. Mod Pathol, 2011;24:1004-14.

86. Chen Y, Kingham K, Ford JM, Rosing J, Van Dam J, Jeffry RB, **Longacre TA**, Chun N, Kurian A, Norton JA. A prospective study of total gastrectomy for *CDH1* positive hereditary diffuse gastric cancer (HDGC). Annals of Surg Oncol, 2011;18:2594-8.

87. Hunter SM, Gorringe KL, Anglesio MS, Sharma R, Gilks CB, Melnyk N, Chiew YE, Australian Ovarian Cancer Study Group, **Longacre TA**, DeFazio A, Huntsman DG, Campbell IG. High-resolution genomic analysis reclassification of a subset of benign serous ovarian tumors as fibromas. Clin Cancer Res, 2011; 17:7273-82.

88. Goodwin P, Phillips K-A, West D, Ennis M, Hopper J, John E, O'Malley F, Milner R, Andrulis I, **Longacre TA**. Prognosis in BRCA1 and BRCA2 associated breast cancer: results of an international prospective breast cancer family registry population-based cohort study. J Clin Oncol, 2012;30:19-26

89. DiMaio MA, **Longacre TA**. Myometrial xanthomatosis: possible relationship to prior pregnancy procedure. Int J Gynecol Pathol, 2012;31:174-9.

90. Cuff J, **Longacre TA**. Endometriosis does not confer improved prognosis in ovarian carcinoma of uniform cell type. Am J Surg Pathol. 2012;36:688-95.

91. Work ME, Andrulis IL, John EM, Hopper JL, Liao Y, Zhang FF, Knight JA, West DW, Milne RL, Giles GG, **Longacre TA**, O'Malley F, Mulligan AM, Southey MC, Hibshoosh H, Terry MB. Risk factors for uncommon histologic subtypes of breast cancer using centralized pathology review in the Breast Cancer Family Registry. Breast Cancer Res Treat. 2012 Apr 25. [Epub ahead of print]

92. Mills AM, Liou S, Kong CS., **Longacre TA**. Are women with endocervical adenocarcinoma at risk for Lynch syndrome? Evaluation of 101 cases including unusual subtypes and lower uterine segment tumors. Int J Gynecol Pathol, 2012;31:463-9.

93. Fujiwara M, Anna Felberg A, Whittemore AS, McGuire V, **Longacre TA**. Prediction of *BRCA1* germ line mutation status in women with ovarian cancer using morphology-based criteria: Identification of a *BRCA1* ovarian cancer phenotype. Am J Surg Pathol, 2012;36:1170-7.

94. Mills AM, Balasubramaniam R, **Longacre TA**, Kong CS, Pinsky BA. Laboratory-developed L1 sequencing and type-specific, real-time polymerase chain reaction for the detection and typing of human papillomaviruses in formalin-fixed, paraffin-embedded tissues. Arch Pathol Lab Med. 2013;137:50-4.

95. Mills AM, Ly A, Balzer BL, Hendrickson MR, Kempson RL, McKenney JK, **Longacre TA**. Cell cycle regulatory markers in uterine atypical leiomyoma and leiomyosarcoma: immunohistochemical study of 60 cases with clinical follow-up. Am J Surg Pathol, 2013;37:634-42.

96. Ly A, Mills AM, McKenney JK, Balzer B, Kempson RL, Hendrickson MR, **Longacre TA**. Atypical leiomyomas of the uterus: a clinicopathologic study of 51 cases. Am J Surg Pathol, 2013;37:643-9.

97. Bala R, Pinsky BJ, Beck AH, Kong CS, Welton ML, **Longacre TA**. $p16^{INK4a}$ is superior to ProEx C in identifying high grade squamous intraepithelial lesions (HSIL) of the anal canal. Am J Surg Pathol, 2013;37:59-68.

98. Lim D, Nucci MR, Gilks CB, **Longacre TA**, Soslow RA, Oliva E. Interobserver variability in the interpretation of tumor cell necrosis in uterine leiomyosarcoma. Am J Surg Pathol, 2013;37:650-8.

99. Hazard K, **Longacre TA.** Ovarian surface epithelial neoplasms in the pediatric population: incidence, histologic subtype, and natural history. Am J Surg Pathol, 2013; 37:548-53.

100. DeLair D, Han G, Irving JA, Leung S, Ewanowich CA, **Longacre TA**, Gilks CB, Soslow R. HNF-1beta in ovarian carcinomas with serous and clear cell change. Int J Gynecol Pathol, 2013;32:541-6.

101. Mahmud N, Ford JM, **Longacre TA**, Parent R, Norton JA. Metastatic lobular breast carcinoma mimicking primary signet ring adenocarcinoma in a patient with a suspected CDH1 mutation. J Clin Oncol. 2014 Mar 3. [Epub ahead of print].

102. Sieh W, Köbel M, **Longacre TA**, Bowtell DD, DeFazio A, Goodman MT, Høgdall E, Deen S, Wentzensen N, Moysich KB, Brenton JD, Clarke B, Menon U, Gilks B, Andre Kim A, Madore J, Fereday S, George J, Galletta L, Lurie G, Wilkens LR, Carney ME, Thompson PJ, Matsuno RK, Krüger Kjær S, Jensen A, Høgdal C, Kalli KR, Fridley BL, Keeney GL, Vierkant RA, Cunningham JM, Brinton LA, Yang HP, Sherman ME, Garcia-Closas M, Lissowska J, Odunsi K, Morrision C, Lele S, Bshara W, Sucheston L, Jiminez-Linan M, Blows FM, Alsop J, Mack M, McGuire V, Rothstein JH, Rosen B,

Bernardini M, Mackay H, Oza A, Wozniak EL, Benjamin E, Gentry-Maharaj A, Gayther SA, Tinker AV, Prentice LM, Chow C, Anglesio MS, Johnatty SE, Chenevix-Trench G, Whittemore AS, Pharoah PDP, Goode EL, Huntsman DG, Ramus SJ. Progesterone receptor and estrogen receptor are prognostic biomarkers for ovarian cancer: an Ovarian Tumor Tissue Analysis consortium study. Lancet Oncol, 2013;14:853-62.

103. Pan LY, Offman SL, Warnke RA, **Longacre TA**. Uterine Rosai-Dorfman disease (sinus histiocytosis with massive lymphadenopathy). Int J Gynecol Pathol. 2014;33:432-6.

104. Wong RJ, **Longacre TA**, Poultsides G, Park W, Rothenberg ME. Gastrointestinal stromal tumor: an unusual cause of gastrointestinal bleeding. Dig Dis Sci, 2013;58:3112-6.

105. McCluggage WG, **Longacre TA**, Fisher C. Myogenin expression in vulvovaginal spindle cell lesions: analysis of a series of cases with emphasis on diagnostic pitfalls. Histopathology, 2013;63:545-50.

106. Mojtahed A, Pai RK, Seo K, Anderson MW, Fisher G, Arber DA, **Longacre TA**. Reactive lymphoid hyperplasia of the terminal ileum: a benign ("lymphoma-like") condition that may harbor aberrant immunohistochemical patterns or clonal immunoglobulin heavy chain gene rearrangements. Appl Immunohistochem Mol Morphol. 2014 Jun 3. [Epub ahead of print].

107. Cuff, J, Salari K, Clarke N, Esheba GE, Forster AD, Huang S, West RB, Higgins JP, **Longacre TA**, Pollack JR. Integrative bioinformatics links HNF1α with clear cell carcinoma and tumor-associated thrombosis. PLoS ONE, 2013;8: e74562.

108. Eberlin LS, Tibshirani R, Zhang J, **Longacre TA**, Berry G, Bingham DB, Norton JA, Zare RN, Poultsides GA Molecular assessment of gastric cancer surgical resection margins by mass spectrometric imaging. Proc Natl Acad Sci U S A. 2014;111:2436-41.

109. McVeigh G, Shah V, **Longacre TA**, McCluggage WG. Endometrial involvement in pseudomyxoma peritonei secondary to low grade mucinous appendiceal neoplasm: report of two cases**.** Int J Gynecol Pathol. 2015 Mar 6. [Epub ahead of print].

110. Clay MR, Allison KH, Folkins AK, **Longacre TA**. Risk of secondary malignancy (including breast) in patients with mismatch repair protein deficiency. Am J Surg Pathol. 2014;38:1494-500.

111. Zhang H, Cohen AL, Krishnakumar S, Wapnir IL, Veeriah S, Deng G, Coram MA, Piskun CM, **Longacre TA**, Herrler M, Frimannsson DO, Telli ML, Dirbas FM, Matin AC, Dairkee SH, Larijani B, Glinsky GV, Bild AH, Jeffrey SS. Patient-derived xenografts of triple-negative breast cancer reproduce molecular features and PIK3CA mutations of patient tumors and respond to mTOR inhibition. Breast Cancer Res. 2014 Apr 7;16(2):R36. [Epub ahead of print].

112. Cloyd JM, Brown J, Sinclair T, Jenks D, Desai J, **Longacre T**, Chandra V, Shelton A. Gastrointestinal mucormycosis initially manifest as hematochezia from arterio-enteric fistula. Dig Dis Sci. 2014 Jun 7. [Epub ahead of print]

113. Martin BA, Kerner JA, Hazard FK, **Longacre TA**. Evaluation of intestinal biopsies for pediatric enteropathy: A proposed immunohistochemical panel approach. Am J Surg Pathol. 2014;38:1387-95.

114. Mills AM, Liou S, Ford JM, Berek JS, Pai RK, **Longacre TA.** Lynch syndrome screening should be considered for all patients with newly diagnosed endometrial cancer. Am J Surg Pathol. 2014;38:1501-9.

115. Nadauld L, Regan JF, Miotke L, Pai RK, **Longacre TA**, Kwok SS, Saxonov S, Ford JM, Hanlee PJ Quantitative and sensitive detection of cancer genome amplifications from formalin fixed paraffin embedded tumors with droplet digital PCR. Transl Med (Sunnyvale). 2012; 2(2): 1000107.

116. DiMaio MA, Park WG, **Longacre TA**. Gastric *Sarcina* organisms in a patient with cystic fibrosis. Human Pathol Case Reports 2014;1:45-48.

117. Erdrich J, Kastenberg ZJ, DiMaio MA, **Longacre TA**, Rhoads KF. Collateral damage: taxane-induced colonic perforation. Dig Dis Sci. 2015;60:313-5.

118. Kozak M, **Longacre TA**, Chang D. Smad4 inactivation predicts for worse prognosis and response to fluorouracil-based treatment in colorectal cancer. J Clin Pathol. 2015 Feb 13. [Epub ahead of print].

119. Rothenberg ME, Araya H, **Longacre TA**, Pasricha PJ. Lanthanum-induced gastrointestinal histiocytosis, a new clinical entity. ACG Case Report J. 2015;2:187-189.

120. Louie CY, Michael A. DiMaio MA, Matsukuma KE, Coutre SE, Berry GJ, **Longacre TA**. Idelalisib-associated enterocolitis: clinicopathologic features and distinction from other enterocolitides. Am J Surg Pathol. 2015; 39:1653-60.

121. Chisholm KM, **Longacre TA**. The utility of peripherin versus MAP-2 and calretinin in the evaluation of Hirschsprung Disease. Appl Immunohistochem Mol Morphol. 2015 Oct 13 [Epub ahead of print].

122. Shaffer JL, Osmundson EC, Visser BC, **Longacre TA**, Koong AC, Chang DT Stereotactic body radiation therapy and central liver toxicity. Pract Radiat Oncol. 2015;5:282-5.

123. Chen EC, Kalisky T, Gupta SK, O'Brien CA, **Longacre TA**, van de Rijn M, Clarke MF, Rothenberg ME. Inhibition of KIT signaling as a strategy to treat KIT+ colorectal cancer. Gastroenterology. 2015:149:705-717.

124. …**Longacre T**...The molecular taxonomy of primary prostate cancer. Cancer Genome Atlas Research Network. Cell 2015 Nov 5;163(4):1011-25.

125. Norton JA, Krampitz G, Zemek A, **Longacre T**, Jensen RT. Better survival but changing causes of death in patients with multiple endocrine neoplasia type 1. Ann Surg. 2015 Jun;261(6):e147-8.

126. Schaberg KB, DiMaio MA, **Longacre TA**. Intraductal papillary mucinous neoplasms often contain epithelium from multiple subtypes and/or are unclassifiable. Am J Surg Pathol. 2016;40:44-50.

127. Bennett JA, Morales-Oyarvide V, Campbell S, **Longacre TA**, Oliva E. Mismatch repair protein expression in clear cell carcinoma of the ovary: incidence and morphologic associations in 109 cases. Am J Surg Pathol. 2016;;40:856-63.

128. Rutgers JKL, Roma A, Park K, Zaino R, Daya D, Rasty G, Johnston A, **Longacre TA**, Ronnett BM, Silva EG. Pattern classification of endocervical adenocarcinoma: reproducibility and review of criteria. Mod Pathol. 2016 June 3 [Epub ahead of print].

129. Krampitz GW, George BM , Willingham SB, Volkmer J-P , Weiskopf K , Jahcha N, Newman AM , Sahoo D , Zemek AJ , Yanovsky RL , Nguyen JK , Schnorr PJ, Mazur PK, Sage J, **Longacre TA**, Visser BJ, Poultsides G, Norton JA , Weissman IL. Identification of tumorigenic cells and therapeutic targets in pancreatic neuroendocrine tumors. PNAS. 2016;16:4464-9.

130. Haas K, **Longacre** T, Castillo RO. Adenovirus hepatic abscess: a novel source of fever of unknown origin in a pediatric liver transplant recipient. Dig Dis Sci. 2016 Feb 8. [Epub ahead of print].

131. Ahn G, Folkins A, McKenney, JK, **Longacre TA**. Low-grade serous carcinoma of the ovary: clinicopathologic analysis of 52 invasive cases and identification of a possible noninvasive intermediate lesion. Am J Surg Pathol, 2016;40:1155-64.

132. McKenney JK, Gilks CB, Kalloger S, **Longacre TA**. Classification of extraovarian implants in patients with ovarian serous borderline tumors (tumors of low malignant potential) based on clinical outcome. Am J Surg Pathol. 2016;40:1165-76.

133. Eberlin LS, Margulis K, Planell-Mendez I, Zare RN, Tibsherani R, **Longacre TA**, Jalali m, Norton JA, Poultsides G. Molecular assessment of pancreatic cancer surgical resection margins by mass spectrometric imaging. PLOS Medicine. 2016; Aug 30;13(8):e1002108.

134. Kidess-Sigal E, Liu H, Triboulet M, Che J, Ramani V, Visser B, Poultsides G, **Longacre T**, Marziali A, Vysotskaia V, Wiggin M, Heirich K, Hanft V, Keilholz U, Tinhofer-Keilholz I, Norton J, Lee M, Sollier-Christen E, Jeffrey S. Enumeration and targeted analysis of KRAS, BRAF and PIK3CA mutations in CTCs captured by a label-

free platform: comparison to ctDNA and tissue in metastatic colorectal cancer. Oncotarget. 2016 Dec 20;7(51):85349-85364. doi: 10.18632/oncotarget.13350

135. Westhoff GL, Fuh KC, **Longacre TA**, McNally JL, Hsu I, Kapp DS, Teng N, Chen L. Radiation therapy for recurrent clear cell ovarian carcinoma. Int J Gynecol Cancer. 2016 Aug 29. [Epub ahead of print]

136. Glaser SL, Canchola AJ, Keegan THM, Clarke CA, **Longacre TA**, Gulley ML. Variation in risk and outcomes of EBV-associated breast carcinoma by epidemiologic characteristics and virus detection strategies. Cancer Causes Control. 2017 Apr;28(4):273-287. doi: 10.1007/s10552-017-0865-3. Epub 2017 Feb 22.

137. Lee J, Snyder ER, Liu Y, Gu X, Wang J, Flowers BM, Kim YJ, Park S, **Longacre TA**, Szot GL, Hruban RH, Kim SK. Reconstituting development of pancreatic intraepithelial neoplasia from primary human pancreas duct cells. Nat Commun. 2017 Mar 8;8:14686. doi: 10.1038/ncomms14686

138. Sangoi AR, Kshirsagar M, Roma AA, Horvai AE, Chivukula M, Ellenson LH, Fadare O, Folkins AK, Garg K, Hanley K, **Longacre TA**, Haas J, McCluggage WG, McKenney JK, Nucci MR, Oliva E, Park KJ, Parkash V, Quick CM, Rabban JT, Rutgers JKL, Soslow R, Vang R, Yemelyanova A, Zaloudek C, Beck AH. Interobserver reproducibility among gynecologic pathologists in diagnosing heterologous osteosarcomatous component in gynecologic tract carcinosarcomas. Int J Gynecol Pathol. 2017;36:386-392.

139. Mello1 SS, Valente1 LJ, Raj1 N, Seoane JA, Flowers BM, McClendon1 J, Bieging-Rolett KT, Lee J, Ivanochko D, Kozak MM, Chang DT, **Longacre TA**, Koong AC, Arrowsmith CH, Kim SK, Vogel H, Wood LD, Hruban RH, Curtis C. Attardi LD. A p53 super-tumor suppressor reveals a tumor suppressive p53-Ptpn14-Yap axis in pancreatic cancer. Cancer Cell. 2017;32:460-473.

140. Goode EL, Block MS, Kalli KR, Vierkant RA, Chen W, Fogarty ZC, Gentry-Maharaj A, Tołoczko A, Hein A, Jensen A, Osorio A, Hartkopf AD, Ryan A, Chudecka-Głaz A, Magliocco A, Hartmann A, Jung A, Australian Ovarian Cancer Study Group, Gao B, Hernandez BY, Fridley BL, McCauley BM, Kennedy C, Wang C, Karpinskyj C, de Sousa CB, Tiezzi DG, Wachter DL, Herpel E, Taran FA, Modugno F, Nelson G, Lubiński J, Menkiszak J, Alsop J, Lester J, García-Donas J, Nation J, Hung J, Palacios J, Kelley JL, Rothstein JH, de Andrade JM, Robles-Díaz L, Intermaggio MP, Widschwendter M, Beckmann MW, Ruebner M, Jimenez-Linan M, Singh N, Oszurek O, Harnett PR, Rambau PF, Sinn P, Wagner P, Ghatage P, Sharma R, Edwards RP, Ness RB, Orsulic S, Brucker SY, Johnatty SE, **Longacre TA**, Eilber U, McGuire V, Sieh W, Natanzon Y, Li Z, Whittemore AS, DeFazio A, Staebler A, Karlan BY, Gilks B, Bowtell DD, Høgdall E, Candido dos Reis FJ, Steed H, Campbell IG, Gronwald J, Brenton JD, Benítez J, Koziak JM, Chang-Claude J, Moysich KB, Cook LS, Kelemen LE, Goodman MT, García MJ, Fasching PA, Kommoss S, Deen S, Kjaer SK, Menon U, Pharoah PDP,

Chenevix-Trench G, Huntsman DG, Winham SJ, Köbel M, Ramus SJ. Dose-response relationship of CD8+ tumor infiltrating lymphocytes and survival time in high-grade serous ovarian cancer. JAMA Oncology. 2017 Dec 1;3(12):e173290.

141. Block MS, Vierkant RA, Rambau PF, Winham SJ, Wagner P, Tołoczko A, Tiezzi DJ, Taran FA, Sinn P, Sieh W, Sharma R, Rothstein JH, Ramón y Cajal T, Paz-Ares L, Oszurek O, Orsulic S, Nelson G, Menkiszak J, McGuire V, McCauley BM, Mack M, Lubiński J, **Longacre TA**, Li Z, Lester J, Kennedy C, Kalli KR, Jung A, Johnatty SE, Jimenez-Linan M, Jensen A, Intermaggio MP, Hung, J, Herpel E, Hernandez BY, Hartkopf AD, Harnett PR, Ghatage P, García-Bueno JM, Gao B, Eilber BU, de Sousa CB, de Andrade JM, Chudecka-Głaz A, Chenevix-Trench G, Cazorla A, Brucker SY, Australian Ovarian Cancer Study Group, Alsop J, Whittemore AS, Steed H, Staebler A, Pharoah PDP, Menon U, Koziak JM, Kommoss S, Kjaer SK, Kelemen LE, Karlan BY, Huntsman DG, Høgdall E, Gronwald J, Goodman MT, Gilks B, José García M, Fasching PA, DeFazio A, Deen S, Chang-Claude J, Candido dos Reis FJ, Campbell IG, Brenton JD, Bowtell DD, Benítez J, Köbel M, Ramus SJ, Goode EL. MyD88 and TLR4 expression in epithelial ovarian cancer. Mayo Clinic Proceedings. 2018;93:307-320.

142. Louie CY, Gomez AJ, Sibley RK, Bass D, **Longacre TA**, Histologic features of gastrointestinal tract biopsies in IgA vasculitis (Henoch-Schönlein Purpura). Am J Surg Pathol. 2018;42:529-533.

143. John EM, Hines LM, Phipps AI, Koo J, **Longacre TA**, Ingles SA, Baumgartner KB, Slattery ML, Wu AH. Reproductive history, breast-feeding and risk of triple negative breast cancer: The Breast Cancer Etiology in Minorities (BEM) Study. Int J Cancer. 2018;142:2273-2285.

144. Charville GW, Lin C-Y, **Longacre TA**. Islet of Langerhans invasion is a feature of malignancy in pancreatic ductal adenocarcinoma. Am J Clin Pathol, In Press.

145. Louie CY, DiMaio M, Charville GW, Berry GJ, **Longacre TA**. Gastrointestinal tract vasculopathy: clinicopathology & description of a possible "new entity" with protean features. Am J Surg Pathol. 2018;42:866-876

146. Tummers WS, Miller SE, Teraphongphom NT, Gomez A, Steinberg I, Huland DM, Hong S, Kothapalli SR, Hasan A, Ertsey R, Bonsing BA, Vahrmeijer AL, Swijnenburg RJ, **Longacre TA**, Fisher G, Gambhir SS, Poultsides GA, Rosenthal EL. Intraoperative pancreatic cancer detection using tumor-specific multimodality molecular imaging. Ann Surg Oncol. 2018;25:1880-1888.

147. Patel SA, **Longacre TA**, Ladabaum U, Lebensohn A, Lin A, Haraldsdottir S. Tumor molecular testing guides anti-PD-1 therapy and provides evidence for pathogenicity of mismatch repair variants. Oncologist. 2018;23:1395-1400.

148. Deveraux KA, Kunder CA, **Longacre TA**. ALK-rearranged tumors are highly enriched in the STUMP subcategory of uterine tumors. Am J Surg Pathol, 2019;43:64-74.

149. Cho KR, Cooper K, Croce S, Djordevic B, Herrington S, Howitt B, Hui P, Ip P, Koebel M, Lax S, Quade BJ, Shaw P, Vidal A, Yemelyanova A, Clarke B, Ellenson LH, **Longacre TA**, Shih I-M, McCluggage WG, Malpica A, Oliva E, Parkash V, Matias-Guiu X. International Society of Gynecological Pathologists (IsGyP) Endometrial Cancer Project: Guidelines from the Special Techniques and Ancillary Studies Group (the "Work"). Int J Gynecol Pathol, 2019;38 Suppl 1:S114-S122.

150. Tummers WS, Miller SE, Teraphongphom NT, van den Berg NS, Gomez A, Hasan A, **Longacre TA**, Fisher GA, Bonsing BA, Vahrmeijer AL, Gambhir SS, Swijnenburg RJ, Rosenthal EL, Poultsides GA. Detection of visually occult metastatic lymph nodes using molecularly targeted fluorescent imaging during surgical resection of pancreatic cancer. HPB (Oxford) 2019;21:883-890.

151. Croce S, Hostein I, **Longacre TA**, Mills AM, Perot G, Devouassoux-Shisheboran M, Velasco V, Floquet A, Guyon F, Chakiba C, Querleu D, Khalifa E, Mayeur L, Rebier F, Leguellec S, Soubeyran I, McCluggage, WG. Uterine and vaginal sarcomas resembling fibrosarcoma: a clinicopathological and molecular analysis of 13 cases showing common *NTRK*-rearrangements and the description of a *COL1A1-PDGFB* fusion novel to uterine neoplasms, Mod Pathol 2019; 32:1008-1022.

152. Forgó E, Gomez AJ, Burton A, Steiner D, Zehnder J, **Longacre TA**. Morphologic, immunophenotypic and molecular features of hypermutation in colorectal carcinomas with mutations in DNA Polymerase Ɛ (*POLE*) identified using a Sanger sequencing based assay. Histopathology 2020;76:366-374.

153. Saleem A, Hoffmann J, Warnke R, Rieger KE, **Longacre T**. Intralymphatic Rosai-Dorfman disease associated with vulvar lymphedema: a case report of an extremely rare phenomenon. Int J Gyn Pathol 2020;39:443-446.

154. Voltaggio L, McCluggage WG, Iding JS, Martin B, **Longacre TA**, Ronnett BM. A novel group of HPV-related adenocarcinomas of the lower anogenital tract (vagina, vulva, and anorectum) in women and men resembling HPV-related endocervical adenocarcinomas. Mod Pathol 2020;33:944-952.

155. Alpert L, Al-Sabti R, Graham RP, Pai RK, Gonzalez RS, Zhang X, Smith V, Wang HL, Westbrook L, Goldblum JR, Bakhshwin A, Shetty S, Klimstra DS, Shia J, Askan G, Robert ME, Thomas C, Frankel WL, Alsomali M, Hagen C, Mostafa ME, Feely MM, Assarzadegan N, Misdraji J, Shih AR, Agostini-Vulaj D, Meis JM, Tang S, Chatterjee D, Kang LI, Hart J, Lee SM, Smith T, Yantiss RK, Hissong EM, Gao ZH, Wu J, Resnick MB, Wu EY, Pai RK, Zhao L, Doyle LA, Chopra S, Panarelli NC, Hu S, **Longacre TA**, Raghavan SS, Lauwers GY, Ghayouri M, Cooper HS, Nagarathinam R, Bellizzi AM, Kakar S, Hosseini M, Rong J, Greenson JK, Lamps LW, Dong Z, Bronner MP. Smooth muscle tumors of the gastrointestinal tract: an analysis of prognostic features in 407 cases. Mod Pathol 2020; 33:1410-1419.

156. Devereaux KA, Fitzpatrick MB, Hartinger S, Jones C, Kunder CA, **Longacre TA**. Pregnancy-associated inflammatory myofibroblastic tumors of the uterus are clinically distinct and highly enriched for *TIMP3-ALK* and *THBS1-ALK* fusions. Am J Surg Pathol 2020;44:970-981.

157. Horton TM, Sundaram V, Lee, C H-J, Hornbacker K, Van Vleck A, Benjamin KN, Zemeck A, **Longacre TA**, Kunz PL, Annes JP. Negative immunohistochemical staining for peptidylglycine α-amidating monooxygenase in primary neuroendocrine neoplasias is an independent predictor of poor survival. Sci Rep 2020;10:10943.

158. Martins FC, Couturier D-L, Paterson A, Karnezis AN, Chow C, Nazeran TM, Odunsi A, Gentry-Maharaj A, Vrvilo A, Hein A, Talhouk A, Osorio A, Brooks-Wilson A, DeFazio A, Fischer A, Hartmann A, Hernaddez BY, McCauley BM, Karpinskyi C, de Sousa CB, Hogdall C, Tiezzi DG, Herpel E, Taran FA, Modugno F, Keeney G, Nelson G, Steed H, Song H, Luk H, Benitez J, Alsop J, Koziak JM, Lester J, Rothstein JH, de Andrade JM, Lundvall L, Paz-Ares L, Robles-Diaz L, Wilkens LR, Garcia MJ, Intermaggio MP, Alcaraz M-L, Brett MA, Beckmann MW, Jimenez-Linan M, Anglesio M, Carney ME, Schneider M, Traficante N, Peiovic N, Singh N, Le N, Sinn P, Ghatage P, Erber R, Edwards R, Vierkant R, Ness RB, Leung S, Orulic S, Brucker SY, Kaufmann SH, Fereday S, Gayther S, Winham SJ, Kommoss S, Peiovic T, **Longacre TA**, McGuire V, Rhenius V, Sieh W, Shyetsoy YB, Whittemore AS, Staebler A, Karlan BY, Rodriguez-Antona CR, Bowtell DD, Goode EL, Hogdall E, Candido dos Rios FJ, Gronwald J, Chang-Claude J, Moysich KB, Kelemen LE, Cook LS, Goodman MT, Fasching PA, Crawford R, Deen S, Menon U, Huntsman DG, Kobel M, Ramus SJ, Pharoah PDP, Brenton JD. Clinical and pathological associations of PTEN expression in ovarian cancer: a multicentre study from the Ovarian Tumour Tissue Analysis Consortium. Br J of Cancer, June 2020. https://doi.org/10.1038/s41416-020-0900-0.

159. Abrha A, Shukla N, Hodan R, **Longacre T**, Raghavan S, Pritchard C, Fisher G, Ford J, Haraldsdottir S. Universal screening of gastrointestinal malignancies for mismatch repair deficiency at Stanford, JNCI Cancer Spectr 2020;4:pkaa054

160. Huang R, Park S, Shen J, **Longacre T**, Amieva M, Ji H, Hwang JH. Serum pepsinogen and gastrin demonstrate low sensitivity and discrimination for gastric precancerous lesions in a multi-ethnic United States population. Clin Gastroenterol Hepatol 2021;Jan 10;S1542-3565(21)00011-2.

161. El Hallani S, Arora R, Lin DI, Måsbäc A, Mateoiu C, McCluggage WG, Otis CN, Parkash V, Parra-Herran C, **Longacre TA**. Mixed endometrioid adenocarcinoma and müllerian adenosarcoma of the uterus and ovary: clinicopathologic characterization with emphasis on its distinction from carcinosarcoma. Am J Surg Pathol 2021;45:374-383.

162. Yamashita R, Long J, **Longacre T**, Martin B, Berry G, Higgins H, Peng L, Rubin DL, Shen J. Exploring the potential of deep learning for the prediction of microsatellite instability in colorectal cancer. Lancet Oncol 2021;22:132-141.

163. Devereaux KA, Weiel J, Kunder CA, Mills A, **Longacre TA**. Neurofibrosarcoma revisited: an institutional case series of uterine sarcomas harboring kinase-related fusions with report of a novel *FGFR-TACC1* fusion. Am J Surg Pathol 2021;45:638-652.

164. Hodan R, Kingham K, Cotter K, Folkins A, Kurian A, Ford J, **Longacre T** Prevalence of Lynch syndrome in women with mismatch repair-deficient ovarian cancers. Cancer Medicine 2021;10:1012-1017.

165. Lo Y-H, Kolahi KS, Du Y, C-Y, Krokhotin A, Nair A, Sobba1 WD, Karlsson1 KK, Jones SJ, **Longacre TA**, Sockell A, Seoane JA, Chen J, Weissman JS, Curtis C, Califano A, Fu H, Crabtree GR, Kuo CJ. A CRISPR/Cas9-engineered ARID1A-deficient human gastric cancer organoid model 1 reveals essential and non-essential modes of oncogenic transformation 2. Cancer Discovery, 2021;11:1562-1581.

166. Pors J, Weiel JJ, Devereaux KA, Folkins AK, **Longacre TA**. Fumarate hydratase-deficiency should be considered in the differential diagnosis of uterine and extra-uterine smooth muscle tumors of uncertain malignant potential (STUMP). Int J Gyn Pathol, 2022;41:268-275.

167. Weiel J, Koh D, Charville G, **Longacre TA**. PAX7 is a sensitive marker of skeletal muscle differentiation in rhabdomyosarcoma and tumors with rhabdomyosarcomatous differentiation in the female genital tract. Int J Gyn Pathol, 2022;41:235-243.

168. Testa S, Million L, **Longacre T**, Bui N. Leiomyosarcoma with FN1-ALK fusion mutation responsive to ALK inhibitors. Case Reports in Oncology, 2021;14:812-81
.
169. Hu S, Alpert L, Graham R, Goldblum JR, Bakhshwin A, Shetty S, Wang HL, Lollie T, Ma C, Siddique A, Karamchandani DM, Chen F, Yantiss RK, Hissong E, Chatterjee D, Chopra S, Chen W, Vazzano J, Wang W-L, Ai D, Lin J, Zheng L, Davis J, Brinkerhoff B, Breitbarth A, Yang M, Madahian S, Panarelli N, Kuan K, Pomper J, **Longacre T**, Raghavan S, Misdraji J, Cui M, Yang Z, Savant DR, Harpaz N, Chen X, Resnick M, Wu EY, Klimstra D, Shia J, Vyas M, Kakar S, Choi W-T, Robert M, Li H, Lee M, Clark I, Li Y, Cao W, Chang Q, Bronner M, Dong Z, Zhang W, Buehler D, Swanson P, Arango, JGM, Bellizzi A, Feely M, Cooper H, Nagarathinam R, Pai R, Hammer S, Hosseini M, Hu JJ, Westerhoff M, Cheng J, Agostini-Vulaj D, Lauwers G, Ghayouri M, Pezhouh MK, Zeng J, Xia R, Yin F, Zhang T, Gao Z, Demko N, Chen H, Yu S, Cates JMM, Hart J, Gonzalez RS. Gastrointestinal stromal tumors arising in uncommon locations: clinicopathologic features and risk assessment of esophageal, colonic, and appendiceal GISTs. Mod Pathol, 2020;33:1410-1419

170. Devereaux K, Steiner D, Ho C, Gomez A, Gilks B, **Longacre T**, Zehnder Z, Howitt B, Suarez CJ. A multiplex SNaPshot assay is a rapid and cost-effective method for detecting *POLE* exonuclease domain mutations in endometrial carcinoma. Int J Gynecol Pathol, 2022;41:541-551

171. Lawrence L, **Longacre T**, Saleem A, Kunder C. Concordance between immunohistochemistry and mutation detection by next generation sequencing for mismatch repair deficiency. Appl Immunohistochem Mol Morphol 2022;30:345-349.

172. Devereaux, KA, Weiel JJ, Pors J, Steiner DF, Ho C, Suarez CJ, Diver E, Karam A, Litkouhi B, Dorigo O, Kidd EA, Yang EJ, Folkins AK, **Longacre TA**, Howitt BE. Prospective molecular classification of endometrial carcinoma: an institutional experience of implementation, practice and clinical experience. Mod Pathol, 2022;35:688-696.

173. Borner K, Teichmann S, Quardokus E, Gee J, Browne K, Musen M, Osumi-Sutherland D, Herr II B, Bueckle A, Paul H, Haniffa M, Jardine L, Bernard A, Ding S-L, Miller J, Lin S, Halushka M, Boppana A, **Longacre T**, Hick J, Lin Y, Valerius MT, He Y, Pryhuber G, Jorgensen M, Radtke A, Wasserfall C, Ginty F, Beusche R, Brusko M, Lee S, Malhotra R, Jain S, Weber G. Anatomical structures, cell types, and biomarkers of the Human Reference Atlas. Nat Cell Biol 2021;23:1117-1128

174. Godwin LL, Ju Y, Jain Y, Sood N, Quardokis EM, Bueckle A, **Longacre T**, Horning A, Lin Y, Esplin ED, Hickey JW, Snyder MP, Patterson NH, Spragins JM, Borner K. Robust and generalizable segmentation of human functional tissue units**.** doi: https://doi.org/10.1101/2021.11.09.467810

175. Forrester J, Foster D, Ford J, **Longacre TA**, Ladabaum U, Fry S, Norton J. Gene directed surgery for hereditary diffuse gastric cancer: long-term outcomes. Cancers 2022;14:728

176. Pors J, Devereaux K, Hildebrandt D, **Longacre TA**. Primary uterine synovial sarcoma with SMARCA4 loss: a case report. Histopathology 2022;80:1135-1137.

177. Becker WR, Nevins S, Chen D, Chiu R, Horning A, Laquindanum R, Mills M, Chaib H, Ladabaum U, **Longacre T**, Shen J, Esplin ED, Kundaje A, Ford JM, Curtis C, Snyder MP, Greenleaf WJ. Single cell analyses reveal a continuum of epigenomic, transcriptomic, and cell composition changes that occur during malignant transformation from polyps to colorectal cancer. Nat Genet 2022;54:985-995

178. Booth A, Torlakovic E, Chetty R, Farris A, Furth E, Goldblum J, Longacre T, Mino-Kenudson M, Riddel, R, Rosty C, Srivastava A, Yantiss R, Cox B, Gonzalez R. Despite simplified diagnostic criteria, observer variability remains in interpretation of colorectal serrated polyps Elsevier Science Inc. 2022: 423-424

179. Kunz PL, Graham NT, Catalano PJ, Nimeiri H, Fisher GA, **Longacre TA**, Suarez CJ, Yao JC, Kulke MH, Hendifar AE, Shanks JC, Shah MH, Zalupski M, Schmulbach EL, Reidy-Lagunes DL, Strosberg JR, O'Dwyer PJ, Benson AB. A randomized study of temozolomide or temozolomide and capecitabine in patients with advanced pancreatic

neuroendocrine tumors: final analysis of efficacy and evaluation of MGMT as a predictive biomarker (ECOG-ACRIN E2211). J Clin Oncol 2023;41:1359-1369

180. Jain Y, Godwin L, Ju Y, Sood N, Quardokus E, Bueckle A, **Longacre T**, Horning A, Lin Y, Esplin E, Hickey J, Snyder M, Patterson N Spraggins J, Borner K Segmentation of human functional tissue units in support of a Human Reference Atlas. Communications Biology, 2023;6:717

181. Köbel M, Kang E-Y, Weir A, Rambau PF, Cheng-Han Lee, Gregg S Nelson, Prafull Ghatage, Nicola S Meagher, Marjorie J Riggan, Jennifer Alsop, Michael S Anglesio, Matthias W Beckmann, Christiani Bisinotto, Michelle Boisen, Jessica Boros, Alison H Brand, Angela Brooks-Wilson, Michael E Carney, Penny Coulson, Madeleine Courtney-Brooks, Kara L Cushing-Haugen, Cezary Cybulski, Suha Deen, Mona A El-Bahrawy, Esther Elishaev, Ramona Erber, Sian Fereday, AOCS Group, Anna Fischer, Simon A Gayther, Arantzazu Barquin-Garcia, Aleksandra Gentry-Maharaj, C Blake Gilks, Helena Gronwald, Marcel Grube, Paul R Harnett, Holly R Harris, Andreas D Hartkopf, Arndt Hartmann, Alexander Hein, Joy Hendley, Brenda Y Hernandez, Yajue Huang, Anna Jakubowska, Mercedes Jimenez-Linan, Michael E Jones, Catherine J Kennedy, Tomasz Kluz, Jennifer M Koziak, Jaime Lesnock, Jenny Lester, Jan Lubiński, Teri A Longacre, Maria Lycke, Constantina Mateoiu, Bryan M McCauley, Valerie McGuire, Britta Ney, Alexander Olawaiye, Sandra Orsulic, Ana Osorio, Luis Paz-Ares, Teresa Ramón y Cajal, Joseph H Rothstein, Matthias Ruebner, Minouk J Schoemaker, Mitul Shah, Raghwa Sharma, Mark E Sherman, Yurii B Shvetsov, Naveena Singh, Helen Steed, Sarah J Storr, Aline Talhouk, Nadia Traficante, Chen Wang, Alice S Whittemore, Martin Widschwendter, Lynne R Wilkens, Stacey J Winham, Javier Benitez, Andrew Berchuck, David D Bowtell, Francisco J Candido dos Reis, Ian Campbell, Linda S Cook, Anna DeFazio, Jennifer A Doherty, Peter A Fasching, Renée T Fortner, María J García, Marc T Goodman, Ellen L Goode, Jacek Gronwald, David G Huntsman, Beth Y Karlan, Linda E Kelemen, Stefan Kommoss, Nhu D Le, Stewart G Martin, Usha Menon, Francesmary Modugno, Paul DP Pharoah, Joellen M Schildkraut, Weiva Sieh, Annette Staebler, Karin Sundfeldt, Anthony J Swerdlow, Susan J Ramus, James D Brenton. p53 and ovarian carcinoma survival: an Ovarian Tumor Tissue Analysis consortium study. J Pathol Clin Res 2023;9:208-222

182. Pors J, Weiel JJ, Ryan E, **Longacre TA**. The evolving spectrum of endometrial glandular proliferations with corded and hyalinized features Am J Surg Pathol, 2023;47:1067-1076.

183. Antil N, Wang H, Kaffas AE, Desser TS, Folkins A, **Longacre T**, Berek J, Lutz AM. In vivo ultrasound molecular imaging in the evaluation of complex ovarian masses: a practical guide to correlation with ex vivo immunohistochemistry. Advanced Biology 2023: e2300091

184. Wei CH, Sadimin E, Agulnik M, Rodriguez L, **Longacre TA**, Fadare O. SMARCA4/BRG1-deficient uterine neoplasm with hybrid adenosarcoma and carcinoma

features: expanding the molecular-morphologic spectrum of SMARCA4-driven gynecologic malignancies. Int J Gynecol Pathol, In Press

185. Hickey JW, Becker WR, Nevins SA, Horning A, Perez AE, Zhu C, Zhu B, Wei B, Chiu R, Chen DC, Cotter DL, Esplin ED, Weimer AK Caraccio C, Venkataraaman V, Schürch CM, Black S, Brbić M, Cao K, Chen S, Zhang W, Monte E, Zhang NR, Ma Z, Leskovec J, Zhang Z, Lin S, **Longacre T**, Plevritis SK, Lin Y, Nolan GP, Greenleaf WJ, Snyder M. Organization of the human intestine at single-cell resolution. Nature e2023; 619 (7970): 572-584

186. Guo JL, Mascharak S, Foster DS, Guardino NJ, Griffin M, Miller E, Raghavan S, **Longacre TA**, Norton JA, Longaker MT. Desmoplastic stromal signatures predict patient outcomes in pancreatic ductal adenocarcinoma. Cell Rep Med 2023;4:101248 doi: 10.1016/j.xcrm.2023.101248. Epub 2023 Oct 20

187. Moura M, Costa J, Velasco V, Kommoss F, Oliva E, Le Loarer F, McCluggage WG**,** Razack R , Isabelle Treilleux I, Mills, **Longacre T**, Devouassoux-Shisheboran M, Hostein I, Azmani R, Blanchard L, Hartog C, Soubeyran I, Khalifa E, Croce S. Pan-TRK immunohistochemistry in gynaecologic mesenchymal tumours: diagnostic implications and pitfalls. Histopathology, In Press

188. Pepper MA, Dulken BW, Wang Y, Zemek AJ, Martin BA, Charu V. **Longacre TA**. S100 protein expression in primary and metastatic neuroendocrine neoplasms: a specific marker of pancreatic origin. Am J Surg Pathol, In Press

189. Keyhanian K, Han L, Howitt B, **Longacre TA**. Specific pathology features enrich selection of endometrial carcinomas for *POLE* testing. Am J Surg Pathol 2024;48:292-301

190. Requena DO, **Longacre TA**, Rosenberg AE, Velez-Torres J, Yanchenko N, Garcia-Buitrago MT, Voltaggio L, Montgomery EA. Synovial sarcoma of the gastrointestinal tract. Mod Pathol, In Press

191. Liang B, Zhao J, Kim Y, Barry-Holson KQ, Bingham DB, Charville GW, Darragh TM, Folkins AK, Howitt BE, Kong CS, **Longacre TA**, McHenry AJ, Toland AMS, Zhang X, Lim K, Khan MJ, Kang D, Yang EJ. Scattering-based light sheet microscopy imaging of HPV-associated squamous lesions of the anal canal: a proof-of-principle study. Mod Pathol, In Press

192. Keyhanian K, Mack T, Forgo E, Tazelaar H, Longacre TA. Female adnexal tumor of probable wolffian origin (wolffian tumor): a potential mimic of peritoneal mesothelioma. Am J Surg Pathol, In Press.

193. Hu S, Graham RP, Choi W-T, Wen KW, Putra J, Chen W, Lin J, Gonzalez IA, Panarelli N, Liu Q, Zhao L, Gong S, Mejia-Bautista M, Escobar DJ, Ma C, Shalaby A, Du XA1, Kang L-I, Zhang W, Chen X, Ding X, Chen HH, Ye Z, Pezhouh MK, Liao X,

Liu Y, Yang Z, Alpert L, Hart J, Goldblum JR, Allende D, Zheng W,. Gonzalez RS, Wang HL, Zhang X, Liu1 X, Longacre T, Westerhoff M, Xue Y. Clinicopathologic features of gastrointestinal tract Langerhans cell histiocytosis. Mod Pathol, In Press.

194. Shiyanbola O, Nigdelioglu R, Dhall D, González IA, Warmke LM, Schechter S, Choi W-T, Hu S, Voltaggio L, Zhang Y, Liang TZ, Ko HM, Charville GW, Longacre TA. Extraskeletal Ewing sarcoma of the gastrointestinal & hepatobiliary tract: deceptive immunophenotype commonly leads to misdiagnosis. Am J Surg Pathol, In Press

195. Hammer PM, Wang A, Vermij L, Zdravkovic S, Heilbroner L, Geisick RLP, Longacre T, Suarez CJ, Ho C, Jenkins TM, Mills AM, Bosse T, Howitt BE. Molecular classification outperforms histologic classification in prognostication of high-grade endometrial carcinomas with spindled, undifferentiated and sarcomatous components. Am J Surg Pathol, In Press

196. Alafraidi M, Hoang L, Howitt BE, Longacre TA, McAlpine JN, Amy Jamieson A, Singh N, Gilks CB, Pors J. The spectrum of estrogen receptor expression in endometrial carcinomas of no specific specific molecular profile. Histopathology, In Press

197. McHenry A, Devereaux K, Ryan E, Chow S, Allard G, Ho BC, Suarez C, Folkins A, Yang E, Longacre TA, Charu V, Howitt BE. Molecular classification of metastatic and recurrent endometrial endometrioid carcinoma: prognostic relevance among low and high stage tumors. Histopathology, In Press

198. John EM, McGuire V, Phipps AI, Lisa M. LM, Koo J, Longacre TA, Kurian AW, Ingles SA, Baumgartner KB, Slattery ML, Wu AH. Reproductive characteristics, menopausal status, race and ethnicity, and risk of breast cancer subtypes defined by ER, PR and HER2 status: The Breast Cancer Etiology in Minorities Study. Breast Cancer Res, In Press

MANUSCRIPTS SUBMITTED

1. Khan M, O'Dea AP, Khan QJ, Klemp J, Norton JA, Ladabaum U, **Longacre TA**, Chun N, Haines HI, Ford JM. CDH1 mutation carrier with lobular breast cancer and no family history of gastric cancer.

2. Lin H, Mou E, Lee J, Hornbacker K, Longacre TA, Khandelwal V, Balise RR, Kunz PL. Pathology reporting for neuroendocrine tumors: adoption of guidelines is slow.

3. Devereaux KA, Barry-Holson KQ, Kunder CA, **Longacre TL**. Low-grade spindle cell neoplasm of the uterus harboring a PAX3-FOXO1 fusion.

4. Forgó, E, Martin BA, **Longacre** TA. High-risk HPV-associated precancerous villous lesions of the colorectum are rare: a single academic institutional experience.

5. Zhu Y, Lee H, Weimer A, Horning A, Nevins S, Esplin E, Paul K, Krieger G, Shipony Z, Mills M, Laquindanum R, Ladabaum U, Chiu R, **Longacre T**, Shen J, Jaimovich A, Lipson D, Kundaje A, Greenleaf W, Curtis C, Ford J. Global loss of fine-scale chromatin architecture and rebalancing of gene expression during early colorectal cancer development.

6. Schenck RO, Khan A, Horning AM, Esplin ED, Egeren DV, Becker WR, Wu S, Hanson C, Barapour N, Jiang L, Contrepois K, Lee H, Nevins SA, Guha TK, Hu Z, Monte E, Laquindanum R, Mills MA, Chaib H, Chiu R, Jian R, Chan J, Ellenberger M, Bahmani B, Michael B, Weimer AK, Esplin DG, Shen J, Lancaster S, Ladabaum U, Longacre TA, Kundaje A, Greenleaf WJ, Ford JM, Snyder MP, Curtis C. Multi-ancestral origins of preneoplastic colorectal lesions.

7. Guo JL, Lopez DM, Mascharak S, Foster DS, Khan A, Davitt MF, Nguyen AT, Burcham AR, Chinta MS, Guardino NJ, Griffin M, Miller E, Januszyk M, Raghavan SS, Longacre TA, Delitto DJ, Norton JA, Longaker MT. Histological architecture uncovers divergent patient outcomes and spatially defined niches in pancreatic ductal adenocarcinoma.

8. Zhang X, Devereaux K, Ryan E, Fei F, Kunder C, Longacre TA. High-grade transformation of ovarian serous borderline tumor: a distinctive morphology with abundant dense eosinophilic cytoplasm and dismal prognosis.

9. Januszyk M, Lu JM, Korah M, Fallah M, Jing SL, Guo JL, Xie PY, Berry CE, Foster DS, Talbott HE, Nee K, Le T, DeIorio SE, Garcia CA, Goncalves A, Nosrati F, Bauer-Rowe KE, Liang NE, Kameni LE, Guo C, Parker JBL, Griffin M, Longacre TA, Wan DC, Delitto D, Norton A, Longaker MT. Defining the tumor microenvironment across millions of cells.

BOOKS AND BOOK CHAPTERS

1. **Longacre TA**, Fenoglio-Preiser CM: Flow cytometry: Application to Oncology. In Comprehensive Textbook of Oncology, 2nd Edition, Moossa AR, Robson MC, Schimpff SC (eds), Williams and Wilkins, Baltimore, 1991; 276-285.

2. Fenoglio-Preiser CM, Listrom MB, **Longacre TA**: Oncogenes and tumor suppressor genes in solid tumors: Neural tumors. In Molecular Diagnostics in Pathology, Fenoglio-Preiser CM, Willman CL (eds), Williams and Wilkins, Baltimore, 1991;167-188.

3. Fenoglio-Preiser CM, **Longacre TA**, Listrom MB: Oncogenes and tumor suppressor genes in solid tumors: Gastrointestinal tract. In Molecular Diagnostics in Pathology, Fenoglio-Preiser CM, Willman CL (eds), Williams and Wilkins, Baltimore, 1991;189-218.

4. Fenoglio-Preiser CM, **Longacre TA**, Listrom MB: Oncogenes and tumor suppressor genes in solid tumors: Breast, gynecologic and urologic tumors. In Molecular Diagnostics in Pathology

Fenoglio-Preiser CM, Willman CL (eds), Williams and Wilkins, Baltimore, 1991; 219-260.

5. Fenoglio-Preiser CM, Listrom MB, **Longacre TA**: Oncogenes and tumor suppressor genes in solid tumors: Lung, endocrine, skin, salivary gland, head and neck, and soft tissue tumors. In Molecular Diagnostics in Pathology, Fenoglio-Preiser CM, Willman CL (eds), Williams and Wilkins, Baltimore, 1991; 261-288.

6. **Longacre TA**, Fenoglio-Preiser CM: Value of colorectal biopsies - a critical appraisal. In The Large Intestine: Physiology, Pathophysiology and Diseases, Philips SF, Pemberton JH, Shorter RG (eds), Raven Press, 1991; 303-333.

7. Fenoglio-Preiser CM, **Longacre TA**, Listrom MB, Blume P: Analysis of cellular markers in IBD: Immunohistochemistry, in situ hybridization, and beyond. In Dysplasia and Cancer in Colitis, Riddell RH (ed), Elsevier, New York, NY, 1991;28:181-198.

8. **Longacre TA**, Kempson RL, Hendrickson MR: Well-differentiated serous neoplasms of the ovary. In Pathology: State of the Art Reviews, Hendrickson MR (ed), Hanley and Belfus, Inc., Philadelphia, PA, 1993;1:255-306.

9. Hendrickson MR, **Longacre TA**, Kempson RL: The clinicopathology of malignant surface epithelial neoplasms of the ovary. In Pathology: State of the Art Reviews, Hendrickson MR (ed), Hanley and Belfus, Inc., Philadelphia, PA, 1993,1:367-410.

10. Hendrickson MR, **Longacre TA**: The classification of surface epithelial neoplasms of the ovary. In Pathology: State of the Art Reviews, Hendrickson MR (ed), Hanley and Belfus, Inc., Philadelphia, PA, 1993;1:189-254.

11. **Longacre TA**, Hendrickson MR, Kempson, RL: Endometrial hyperplasia, metaplasia and carcinoma. In Obstetrical and Gynaecological Pathology, Fox H (ed), Churchill and Livingstone, New York, NY, 1995;421-510.

12. **Longacre TA**, Teng NNH, Hendrickson MR: The gynecologic frozen section. In Pathology: State of the Art Reviews, Ranchod M (ed), Hanley and Belfus, Inc., Philadelphia, PA, 1996; 3:427-492.

13. **Longacre TA**, Hendrickson MR: Mesenchymal tumors. In Atlas of Gynecology, Vol II: Gynecologic Pathology, Current Medicine, Philadelphia, PA, 1997; 6.1-6.17.

14. Hendrickson MR, **Longacre TA**, Kempson RL: The uterine corpus. Evaluation of endometrial and myometrial specimens. In Diagnostic Surgical Pathology, Sternberg SS (ed), Raven Press, New York, NY, 1999.

15. Hendrickson MR, **Longacre TA**. Problems in uterine corpus pathology: In Gynecologic Cancer: Controversies in Management, Gershenson DM, Gore M, McGuire WP, Thomas G, and Quinn MA (ed), Elsevier, Philadelphia, PA, 2004.

16. Hendrickson MR, **Longacre TA**, Kempson RL: The uterine corpus. Evaluation of endometrial and myometrial specimens. In Sternberg's Diagnostic Surgical Pathology, Mills SE (ed), Lippincott Williams and Wilkins, New York, NY, 2004.

17. Hendrickson MR, **Longacre TA**, Kempson RL. Pathology of uterine sarcomas. In Cancer of the Uterus, Coukos G and Rubin SC and (eds), Marcel Dekker, New York, NY, 2005.

18. Pai RK, **Longacre TA**. Pseudomyxoma peritonei syndrome: Classification of appendiceal mucinous tumors. Peritoneal Carcinomatosis: A Multidisciplinary Approach, Ceelen W (ed), Cancer Treatment and Research Series, Springer, 2007.

19. **Longacre TA**, Gilks CB. Nonneoplastic lesions of the ovary. In Gynecologic Pathology, Nucci MR and Oliva E (eds), Foundations in Diagnostic Pathology, Goldblum JR (Series ed) Churchill Livingston, Elsevier, Philadelphia, PA, 2009;367-391.

20. **Longacre TA**, Gilks CB. Surface epithelial stromal tumors of the ovary. In Gynecologic Pathology, Nucci MR and Oliva E (eds), Foundations in Diagnostic Pathology, Goldblum JR (Series ed), Churchill Livingston, Elsevier, Philadelphia, PA, 2009; 393-444.

21. **Longacre TA**, Atkins K, Hendrickson MR, Kempson RL: The uterine corpus. In Sternberg's Diagnostic Surgical Pathology, Mills SE (ed), Fifth Edition, Lippincott Williams and Wilkins, New York, NY, 2009; 2184-2278.

22. Kong CS, **Longacre TA,** Hendrickson MR. Pathology. In Berek and Hacker's *Gynecologic Oncology*, Berek JS and Hacker NF (Ed), Fifth Edition, Lippincott Williams and Wilkins, Philadelphia, PA, 2009;121-214.

23. Mills AM, **Longacre TA**. Smooth muscle tumors of the female genital tract. In *Current Concepts in Gynecologic Pathology: Mesenchymal Tumors of the Female Genital Tract*. Oliva E (Ed), Surgical Pathology Clinics, W.B. Saunders, New York, NY, 2009; Vol 2, 625-678.

24. **Longacre TA,** Berek JS, Hendrickson MR. The Gynecologic Frozen Section, In *Frozen Section Diagnosis in Pathology*, Ranchod M (Ed), 2010.

25. **Longacre TA**. Benign and low grade serous epithelial tumors: recent developments and diagnostic problems. In: *Current Concepts in Gynecologic Pathology: Epithelial Tumors of the Gynecologic Tract*. Soslow RA (Ed.), Surgical Pathology Clinics, W.B. Saunders, New York, NY, 2011; Vol 4, 331-374.

26. Mills AM, **Longacre TA**. Atypical endometrial hyperplasia and well differentiated endometrioid adenocarcinoma of the uterine corpus. In: *Current Concepts in Gynecologic Pathology: Epithelial Tumors of the Gynecologic Tract*. Soslow RA (Ed.), Surgical Pathology Clinics, W.B. Saunders, New York, NY, 2011; Vol 4, 149-198.

27. Berek JS. **Longacre TA**, Friedlander M. Ovarian, fallopian tube, and peritoneal cancer. In Berek and Novak's Gynecology, Berek JS (Ed), Fifteenth Edition, Lippincott Williams and

Wilkins, Philadelphia, PA, 2012.

28. **Longacre TA** and Soslow RA. *The Uterine Corpus and Cervix*, Cambridge University Press, Weiss L (Ed), New York, NY, 2012.

29. Kitayama J, **Longacre TA**. Breast Anatomy: Normal Histology. In *Practical Breast Pathology: A Diagnostic Approach*. *A Volume in the Pattern Recognition Series.* Atkins KA and Kong CS (Ed.), Philadelphia, Churchill Livingstone Elsevier. 2013

30. Rogers W, **Longacre TA**. Sentinel Lymph Nodes. In *Practical Breast Pathology: A Diagnostic Approach. A Volume in the Pattern Recognition Series*. Atkins KA and Kong CS (Ed.), Philadelphia, Churchill Livingstone Elsevier, 2013.

31. Rabban JT, **Longacre TA**. Immunohistochemistry of the Female Genital Tract. In *Diagnostic Immunohistochemistry*, Dabbs D (Ed), 4th Edition, Elsevier, Philadelphia, PA. 2014.

32. Folkins A, **Longacre TA**, Crum, C. Hereditable Ovarian Cancer. In *Pathobiology of Human Disease: A Dynamic Encyclopedia of Disease Mechanisms.* Mitchell R (Ed), Elsevier, Philadelphia, PA, In Press.

33. Seidman JD, Bell DA, Crum CP, Gilks CB, Kurman RJ, Levine DA, **Longacre TA,** Pasini B, Riva C, Sherman ME, Shih I.M., Singer G, Soslow R, Vang R. Tumours of the Ovary: Serous Tumours. In *World Health Organization (WHO) Classification of Tumours of Female Reproductive Organs*, Kurman RJ, Carcangiu ML, Herrington CS, Young RH (Ed), 4th edition, IARC, Lyon, France, 2014, 17-24.

34. Gilks CB, Bell DA, Huntsman D, **Longacre TA**, Oliva E, Soslow R, Tsuda H, Zanonni GF, Zhao C, Zhou X. Tumours of the Ovary: Clear Cell Tumours. In *World Health Organization (WHO) Classification of Tumours of Female Reproductive Organs*, Kurman RJ, Carcangiu ML, Herrington CS, Young RH (Ed), 4th edition, IARC, Lyon France, 2014, 33-37.

35. Oliva E, Carcangiu MR, Carinelli SG, Ip P, Loening T, **Longacre TA**, Nucci MR, Prat J, Zaloudek CJ. Tumours of the Uterine Corpus: Mesenchymal Tumours. In *World Health Organization (WHO) Classification of Tumours of Female Reproductive Organs*, Kurman RJ, Carcangiu ML, Herrington CS, Young RH (Ed), 4th edition, IARC, Lyon France, 2014, 135-147.

36. **Longacre TA,** Bell DA, Malpica A, Prat J, Ronnett BM, Sediman JD, Vang R. Tumours of the Ovary: Mucinous Tumours. In *World Health Organization (WHO) Classification of Tumours of Female Reproductive Organs*, Kurman RJ, Carcangiu ML, Herrington CS, Young RH (Ed), 4th edition, IARC, Lyon, France, 2014, 25-28.

37. **Longacre TA**, Wells M. Tumours of the Ovary: Serous Tumours. Introduction to Serous Tumours – Pelvic Serous Neoplasia. In *World Health Organization (WHO) Classification of Tumours of Female Reproductive Organs*, Kurman RJ, Carcangiu ML, Herrington CS, Young RH (Ed), 4th edition, IARC, Lyon, France, 2014, 15-16.

38. **Longacre TA**, Atkins K, Hendrickson MR, Kempson RL. Uterine Corpus. In *Sternberg's Diagnostic Surgical Pathology*, Mills SE (Ed), 6th Edition, Wolters Kluwer Health, Philadelphia, PA, 2015, 2438-2535.

39. **Longacre** TA, Mills SE. Vulva and Vagina. In *Sternberg's Diagnostic Surgical Pathology*, Mills SE (Ed), 6th Edition, Wolters Kluwer Health, Philadelphia, PA, 2015, 2349-2387.

40. **Longacre TA** (Associate Editor), In *Sternberg's Diagnostic Surgical Pathology*, Mills SE (Ed), 6th Edition, Wolters Kluwer Health, Philadelphia, PA, 2015.

41**.** Kong CS, **Longacre TA,** Hendrickson MR. Pathology. In *Berek and Hacker's Gynecologic Oncology*, Berek JS and Hacker NF (Ed), 6th Edition, Lippincott Williams and Wilkins, Philadelphia, PA, 2015; 123-219.

42. Mills A and **Longacre TA**. Lynch Syndrome: Female Genital Tract Cancer Diagnosis and screening. In *Surgical Pathology Clinics: Gynecologic Pathology*, Clarke BA and McCluggage WG (Ed), Elsevier Inc., Philadelphia, PA, 2016; 201-214.

43. Mills A and **Longacre TA**. Hereditary Endometrial Cancer, In *Precision Molecular Pathology of Uterine Cancer,* Deavers MT and Coffey DM (Eds), Springer, New York, NY, 2017; 169-186.

44. Folkins A, **Longacre TA**. Immunohistochemistry of the Female Genital Tract. In *Diagnostic Immunohistochemistry*, Dabbs D (Ed), 5th Edition, Elsevier, Philadelphia, PA. 2019, 662-717.

45. Folkins AK, **Longacre TA**. Low-grade serous neoplasia of the female genital tract. In Surgical Pathology Clinics, Surg Pathol Clin. 2019;12:481-513.

46. Berek JS. English DP, **Longacre TA**, Friedlander M. Ovarian, Fallopian Tube, and Peritoneal Cancer. In Berek and Novak's Gynecology, Berek JS (Ed), Sixteenth Edition, Lippincott Williams and Wilkins, Philadelphia, PA, 2020; 1077-1142.

47. **Longacre TA**. WHO Classification of Tumours Editorial Board, Female Genital Tumours. Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

48. **Longacre TA**, Davidson B, Kong CS, Malpica A, Vang R. Serous cystadenoma, adenofibroma, and surface papilloma of the ovary. In WHO Classification of Tumours Editorial Board, Female Genital Tumours, pp 36-37. Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

49. Vang R, Davidson B, Kong CS, **Longacre TA**, Malipica A. Serous borderline tumour of the ovary, pp 38-42. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

50. **Longacre TA**, Davidson B, Folkins AK, Kong CS, Malpica A, Vang R. Low-grade serous carcinoma of the ovary, pp 43-44. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

51. Vang R, Khunamornpong S, Kobel, M, **Longacre TA**, Ramalingam P. Mucinous cystadenoma and adenofibroma, pp 48-49. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

52. Vang R, Khunamornpong S, Kobel, M, **Longacre TA**, Ramalingam P. Mucinous borderline tumour, pp 50-52. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

53. Vang R, Khunamornpong S, Kobel, M, **Longacre TA**, Ramalingam P. Mucinous carcinoma of the ovary, pp 53-54. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

54. **Longacre TA**, Lim D, Parra-Herran C. Uterine leiomyosarcoma, pp 283-285. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

55. **Longacre TA**, McCluggage WG. Atypical polypoid adenomyoma, pp 303-3-4. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

56. **Longacre TA**, Kiyokawa T, Kong CS. Adenocarcinoma, HPV-associated, of the vagina, pp 407. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

57. **Longacre TA**, Chiang S. NTRK-rearranged spindle cell neoplasm (emerging), pp 500-501. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

58. **Longacre TA**, DeLair DF, Hui P, Soslow RA. Lynch syndrome, pp 546-547. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

59. Matias-Guiu X, **Longacre TA**. Cowden syndrome, pp 548-549. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

60. **Longacre TA**, Mills AM. Uterine Corpus: Mesenchymal. In *Mills's & Sternberg's Diagnostic Surgical Pathology*, Longacre TA (Ed), Seventh Edition, Lippincott Williams and Wilkins, New York, NY, 2021, In Press.

61. Mills AM, **Longacre TA**. Uterine Corpus: Epithelial. In *Mills's & Sternberg's Diagnostic Surgical Pathology*, Longacre TA (Ed), 7th Edition, Lippincott Williams and Wilkins, New York,

NY, 2021, In Press.

62. **Longacre TA**, Howitt BE. Vulva and Vagina. In *Mills's & Sternberg's Diagnostic Surgical Pathology*, Longacre TA (Ed), 7th Edition, Lippincott Williams and Wilkins, New York, NY, 2021, In Press.

63. **Longacre TA**, Shen J. The Stomach. In *Mills's & Sternberg's Diagnostic Surgical Pathology*, Longacre TA (Ed), 7th Edition, Lippincott Williams and Wilkins, New York, NY, 2021, In Press.

64. *Mills's & Sternberg's Diagnostic Surgical Pathology*. **Longacre TA** (Ed), 7th Edition, Lippincott Williams and Wilkins, New York, NY, 2021, In Press.

65. Folkins A, **Longacre TA**. Immunohistochemistry of the Female Genital Tract. In *Diagnostic Immunohistochemistry*, Dabbs D (Ed), 6th Edition, Elsevier, Philadelphia, PA. In Press.

66. Berek JS. Renz, M, **Longacre TA**, Friedlander M. Ovarian, Fallopian Tube, and Peritoneal Cancer. In Berek and Novak's Gynecology, Berek JS (Ed), Seventeenth Edition, Lippincott Williams and Wilkins, Philadelphia, PA, In Press

67. Longacre TA, Forgo E, Wang C. Mills & Sternberg's Diagnostic Surgical Pathology: *Review* Third Edition, In Press

INVITED MONOGRAPHS, REVIEWS, AND COMMENTARY

1. **Longacre TA**, Listrom MB, Fenoglio-Preiser CM. Zollinger Ellison syndrome with microcarcinoidosis. ASCP Check-Sample, Anatomic Pathology 1989; II No. APII 89-5 (APII-149).

2. **Longacre TA**, Foucar K. Red (blood) cell aplasia (transient erythroblastopenia of childhood) with increased bone marrow hematogones. ASCP Check-Sample, Hematology1989;NoH89-9 (H212).

3. **Longacre TA**, Fenoglio-Preiser CM. Colorectal biopsies. Prog Surg Pathol 1990; 11:27-53.

4. **Longacre TA**, Rouse RV: CD31: A potential new marker for vascular neoplasia. Adv Anat Pathol 1994; 1:16.

5. Hendrickson MR, **Longacre TA**, Kempson RL: Uterine papillary serous carcinoma revisited [Editorial; comment]. Gynecol Oncol 1994; 54:261-263.

6. **Longacre TA**, Hendrickson MR: Small cell carcinoma of the ovary, hypercalcemic type: the evolution of a clinicohistopathologic syndrome. Adv Anat Pathol 1995; 2:386-393.

7. Orenstein JM, Kotler DP: Diarrheogenic bacterial enteritis in acquired immune deficiency

syndrome: a light and electron microscopy study of 52 cases [Commentary by **Teri A Longacre**]. Adv Gastroenterol Hepatol Clin Nutr 1996; 1:48-53.

8. **Longacre TA**, Hendrickson MR, Kempson RL: Predicting clinical outcome for uterine smooth muscle neoplasms with a reasonable degree of certainty. Adv Anat Pathol 1997;4:95-104.

9. **Longacre TA**, Hendrickson MR. Distinguishing primary ovarian surface epithelial neoplasms from epithelial metastases to the ovary. Pathology Case Reviews 1997;2:1-10.

10. Shibata A, Parsonnet J, **Longacre TA**, Garcia MI, Puligandla B, Davis, RE, Vogelman JH, Orentreich N, Habel LA: CagA status of Helicobacter pylori infection and p53 gene mutations in gastric adenocarcinoma. Carcinogenesis 2003;24:147 [Letter to the Editor (Response)].

11. Balzer BL, **Longacre TA**. Aggressive angiomyxoma of the female genital tract. Pathology Case Reviews, 2005;10:46-54.

12. **Longacre TA**, Kempson RL, Hendrickson MR. Serous borderline tumors of the ovary: serous tumors of low malignant potential (serous borderline tumors). Moving Toward Détente. Histopathology 2005; 47:310-318.

13. Pai RK, **Longacre TA**. Appendiceal mucinous tumors and pseudomyxoma peritonei: histologic features, diagnostic problems and proposed classification. Adv Anat Pathol 2005;13:304-310.

14. **Longacre TA**, Oliva E, Soslow RA Recommendations for the reporting of fallopian tube malignancies. ADASP Checklist and Guidelines for Surgical Pathology Reporting of Malignant Neoplasms. Association of Directors of Anatomic and Surgical Pathology. Virchow Archives 2007; 450:25-29.

15. **Longacre TA**, Oliva E, Soslow RA. Recommendations for the reporting of fallopian tube malignancies. ADASP Checklist and Guidelines for Surgical Pathology Reporting of Malignant Neoplasms. Association of Directors of Anatomic and Surgical Pathology. Hum Pathol 2007; 38:1160.e1-1160.e7

16. **Longacre TA,** Kong CS, Welton ML. Diagnostic problems in anal pathology. Adv Anat Pathol 2008;15:263-278.

17. McKenney JK and **Longacre TA**. Low grade endometrial adenocarcinoma: an algorithm for distinguishing atypical endometrial hyperplasia and other benign (& malignant) mimics. Adv Anat Pathol 2009; 16:1-22.

18. Mills AM, **Longacre TA**. Endometrial hyperplasia. Seminars in Diagnostic Pathology 2010; 27:199-214.

19. Gilks CB, Clarke BA, Han G, Köbel M, **Longacre T**, McCluggage WG, Seidman JD, Shaw P, Soslow RA. Letter to the editor regarding 'Roh MH, Lassin Y, Miron A et al. High-grade fimbrial-ovarian carcinomas are unified by p53, PTEN and PAX2 expression'. Mod Pathol 2011;24:1281-2.

20. Offman S and **Longacre TA.** Clear cell carcinoma of the female genital tract. Adv Anat Pathol 2012; 19:296-312.

21. Folkins A and **Longacre TA**. Hereditary cancer syndromes in the female genital tract. Histopathology 2013;62:2-30.

22. Conklin CMJ and **Longacre TA.** Lynch syndrome in endometrial carcinoma: a sentinel diagnosis. Pathology Case Reviews 2014, In Press.

23. Conklin CMJ and **Longacre TA.** Endometrial stromal tumors: support for a new classification. Adv Anat Pathol. 2014;21:383-93.

24. Mills A and **Longacre TA**. Lynch syndrome screening in the gynecologic tract: current state of the art. Am J Surg Pathol. 2016;40:e35-44

25. **Longacre TA**, Broaddus R, Chuang LT, Cohen MB, Jamieson PS, Jarboe EA, Mutter GL, Otis CN, Zaino R. Template for reporting results of biomarker testing of specimens from patients with carcinoma of the endometrium, Arch Pathol Lab Med. 2017 Mar 16. doi: 10.5858/arpa.2016-0450-CP. [Epub ahead of print].

26. Yang EJ, Kong CS, Longacre TA. Vulvar and anal intraepithelial neoplasia: terminology, diagnosis, and ancillary studies. Adv Anat Pathol. 2017; 24: 136-150

27. Charville GW, **Longacre TA**. Gastrointestinal stromal tumors: implications of morphologic and molecular heterogeneity for precision medicine. Adv Anat Pathol. 2017; 24:336-353

28. Malpica A, **Longacre TA**. Prognostic indicators in ovarian serous borderline tumours Pathology 2018; 50:205-213.

29. Forgo E, **Longacre TA**. Low-grade serous carcinoma. Pathology Outlines 2020

30. Forgo E, **Longacre TA**. High-grade serous carcinoma. Pathology Outlines 2020.

31. Forgo E, Chen A, Kohali K, **Longacre TA**, Charville G. Non-neoplastic mucinous change in interval appendectomies: a potential mimic of low-grade appendiceal mucinous neoplasm (LAMN). In Press, Adv Anat Pathol 2022

32. Han LM, Weiel J, **Longacre TA**, Folkins A. DICER-associated tumors in the female genital tract: detection and differential diagnosis. Adv Anat Pathol 2022;29:297-308

33. Berg K, **Longacre TA**. Gastric dysplasia. Pathology Outlines 2022.

34. Razzano D, **Longacre TA**. Gastric neuroendocrine tumors. Pathology Outlines 2022

35. Wang C, **Longacre TA**. Gastric adenomas. Pathology Outlines 2022.

CORRESPONDENCE

1. Lennerz JK, Pantanowitz L, Amin M, Eltoum I-E, Hameed M, Kalof A, Khanafshar E, Kunju L, Lazenby A, Montone K, Otis C, Reid M, Staats P, Whitney-Miller C, Abendroth C, Manju A, Birdsong G, Bleiweiss I, Bronner M, Chapman J, Cipriani N, de la Roza G, Esposito M, Fadare O, Ferrer K, Fletcher C, Frishberg D, Garcia F, Geldenhuys L, Gill R, Gui D, Halat S, Hameed O, Hornick J, Huber A, Jain D, Jhala N, Jorda M, Jorns J, Kaplan J, Khalifa M, Khan A, Kim G, Lee E, LiVolsi V, **Longacre T**, Magi-Galluzzi C, McCall S, McPhaul L, Mehta V, Merzianu M, Miller S, Molberg K, Moreira A, Naini B, Nose V, O'Toole K, Picken M, Prieto V, Pullman J, Quick C, Reynolds J, Rosenberg A, Schnitt S, Schwartz M, Sekosan M, Smith MT, Sohani A, Stowman A, Vanguri V, Wang B, Watts J, Wei S, Whitney K, Younes M, Zee S, Bracamonte E. Ensuring remote diagnostics for pathologists: an open letter to the US Congress. In Press, Nature Medicine 2022

ABSTRACTS (NOT PUBLISHED ELSEWHERE)

1. Hildebrandt RH, **Longacre TA**, Willman C, Hoffman C, Bartow S: Non-malignant human breast tissue expresses the int-2 proto-oncogene. United States and Canadian Academy of Pathology, *Winner of the Stowell-Orbison Award*, March, 1989.

2. Garcia MI, Parsonnet J, **Longacre T**, Puligandla B, Habel L, Vogelman J, Orentreich N, Shibata A: Cell proliferation and p53 abnormality in gastric cancer by Helicobacter pylori phenotype and tumor histologic type. American Association for Cancer Research, San Francisco, CA, April, 2000.

3. West RB, Linn SC, Nielsen T, Zhu S, **Longacre T**, Husain A, Alter O, Patel R, Brown PO, Botstein D, Rubin BP, Goldblum JR, van de Rijn M. Distinction between low grade endometrial stromal sarcoma and smooth muscle tumors by cDNA gene array analysis. United States and Canadian Academy of Pathology, Chicago, IL, March, 2002.

4. Balzer B, Schaner M, Ross D, Montgomery K, Teng N, Sikic B, **Longacre T**. Protein expression study of ovarian surface epithelial neoplasms using tissue microarray analysis: emergence of a clear cell signature profile. Mod Pathol 16:181A, 2003.

5. West RB, Gilks CB, van de Rijn M, **Longacre TA**. Stromal signatures in ovarian serous tumors of low malignant potential and serous carcinoma. Mod Pathol 19:201A, 2006.

6. Silva E, Vang R, Kurman R, Prat J, **Longacre T**. Invasive implants of serous borderline ovarian neoplasms – a multiinstitutional study. Mod Pathol 19:197A, 2006.

7. Ford JM, Chun N, Van Dam J, Jeffrey RB, **Longacre TA**, Norton J. Hereditary diffuse gastric cancer: patients identified clinically versus by genetic screening. ASCO GI conference, Orlando, FL. January 19, 2007.

8. Rogers W, Mulligan AM, Bane A, West D, Andrulis I, Whittemore A3, Senie R, O'Malley FP, John EM, **Longacre TA**. Histologic characterization of in situ carcinoma in BRCA1 and BRCA2 mutation carriers without invasive disease: a population-based study, Mod Pathol 2008;21:52A.

9. Cruise M, **Longacre TA**, Stelow E. Loss of PTEN expression but intact expression of mismatch repair proteins (MLH-1 and MSH-2) in atypical polypoid adenomyomas of the uterus. Mod Pathol 2011;24:242A.

10. DiMaio MA, Beck AH, Montgomery KD, West RB, **Longacre TA**, Kong CS. PAX8 and WT1 are superior to PAX2 and BRST2 in distinguishing mullerian tract tumors from breast carcinomas. Mod Pathol 2011;24:243A.

11. Mills AM, Pai RK, Liou S, **Longacre TA**. Clinicopathologic features of sporadic endometrial carcinomas with MLH1 promoter hypermethylation: a study of 54 cases. Mod Pathol 2011;24:260A.

12. DiMaio MA, Pai RK, **Longacre TA**. PAX8 differentiates gastrointestinal carcinomas from mucinous carcinomas of the ovary, but not mucinous carcinomas arising in ovarian teratomas. Mod Pathol 2012;25:266A.

13. Karnezis AN, Jalas JR, Li Y, Lau Y-FC, Chen L-M, **Longacre TA**, Zaloudek CJ. A clinicopathological and immunohistochemical study of 54 cases of dysgerminoma and gonadoblastoma. Mod Pathol 2012;25:280A.

14. Moore FN, Pan L, **Longacre TA**. Endometriosis-associated carcinomas exhibit significant site-specific differences: analysis of 396 cases. Mod Pathol 2012;25:288A.

15. Offman SL, Liou S, Mills AM, **Longacre TA**. A clinicopathologic analysis of 419 consecutive endometrial carcinomas with emphasis on lower uterine segment tumors. Mod Pathol 2012;25:290A-291A.

16. Pan LY, Moore FN, **Longacre TA**. Mesonephric-like endometrioid glandular proliferations: a morphologically distinct form of metaplasia. Mod Pathol 2012;25:291A.

17. Cuff J, **Longacre TA**, Arber DA. Quality assurance impact of diagnostic discrepancies. Mod Pathol 2012;25:497A.

LETTERS

1. Lennerz JK, Pantanowitz L, Amin MB, Eltoum I, Hameed, MR, Kalof AN, Khanafshar E, Kunju, L. P., Lazenby, A. J., Montone, K. T., Otis, C. N., Reid, M. D., Staats, P. N., Whitney-Miller, C. L., Abendroth, C. S., Aron, M., Birdsong, G. G., Bleiweiss, I. J., Bronner, M. P., Chapman, J., Cipriani, N. A., de la Roza, G., Esposito, M. J., Fadare, O., Ferrer, K., Fletcher, C. D., Frishberg, D. P., Garcia, F. U., Geldenhuys, L., Gill, R. M., Gui, D., Halat, S., Hameed, O., Hornick, J. L., Huber, A. R., Jain, D., Jhala, N., Jorda, M., Jorns, J. M., Kaplan, J., Khalifa, M. A., Khan, A., Kim, G. E., Lee, E. Y., LiVolsi, V. A., **Longacre, T**, Magi-Galluzzi, C., McCall, S. J., McPhaul, L., Mehta, V., Merzianu, M., Miller, S. B., Molberg, K. H., Moreira, A. L., Naini, B. V., Nose, V., O'Toole, K., Picken, M., Prieto, V. G., Pullman, J. M., Quick, C. M., Reynolds, J. P., Rosenberg, A. E., Schnitt, S. J., Schwartz, M. R., Sekosan, M., Smith, M. T., Sohani, A., Stowman, A., Vanguri, V. K., Wang B, Watts JC, Wei S, Whitney K, Younes M, Zee S, Bracamonte ER. Ensuring remote diagnostics for pathologists: an open letter to the US Congress. Nat Med 2022 Oct 20. doi: 10.1038/ s41591-022-02040-6. Online ahead of print

FORMER GRANT SUPPORT

Co-Investigator, Epidemiology of Helicobacter Pylori Transmission, NIH Grant R01 AI042801, for the period 03/01/06 – 02/28/11, 1%

Co-Investigator, Epigenetic Changes and Phenotype-Specific Therapeutic Strategies in Breast Cancer, University of Utah, R01 GM085601-01, for the period 07/01/08 – 6/30/12, 5%

Principle Investigator, Caring for Carcinoid Foundation Neuroendocrine Tumor Biospecimen Consortium, Caring for Carcinoid Foundation, for the period 01/01/09 - 12/31/10, 1%

Co-Investigator, Molecular Diagnosis of Human GI Cancers for Surgical Tumor Margin Assessment Using Ambient Mass Spectrometry, Stanford Hospital& Clinics: Innovation Fund Award, for the period 11/15/12 – 11/14/13, 2%

Co-Principal Investigator, A Tissue Microarray for Neuroendocrine Tumors, Developmental Cancer Research Award, Stanford Cancer Institute, for the period 11/1/13 – 11/1/14, 5%

Co-Investigator, Prognostic & Therapeutic Advances through Systematic Immuno-Genomic Characterization of Carcinoid Tumors, Caring for Carcinoid Foundation, $100,000.00, for the period 04/06/2015 to 04/05/2016, 1%.

Co-Investigator, Molecularly Targeted Ultrasound in Ovarian Cancer NIH 5R01CA21193204, $3,522.44, for the period of 5/1/2019-4/30/2023, 3%

Co-Investigator, Human Tumor Atlas Network, Precancer Atlas of Familial Adenomatous Polyposis NIH 1U2CCA233311-01, $49,379.13 for the period of 9/30/2018-6/30/23, 4%

Co-Investigator, Stanford Tissue Mapping Center, NIH 5U54HG010426-03, 7,377.50 for the period of 9/30/2018-6/30/2022

Co-Investigator, Molecular Imaging Methods for the Detection of Pancreatic Ductal Adenocarcinoma NIH 1U01CA21002001A, $4,676,729, for the period 5/1/2017-4/30/2023, 1%.

CURRRENT GRANT SUPPORT

Stanford Cancer Institute, NIH 2P30CA124435-14, $40,215,947, for the period 6/4/2007-5/31/2127, 10%

3/16/2024

EXHIBIT B

Newsome, Tamara

EXHIBIT B

Histology Slides from Holy Cross Hospital

Sample No.	Description
1	S15-2514 FS1 H&E
2	S15-2514 A2 H&E
3	S15-2514 A3 H&E
4	S15-2514 A4 H&E
5	S15-2514 A5 H&E
6	S15-2514 A6 H&E
7	S15-2514 A7 H&E
8	S15-2514 A8 H&E
9	S15-2514 A8-1 UNSTAINED
10	S15-2514 A8-2 UNSTAINED
11	S15-2514 A8-3 UNSTAINED
12	S15-2514 A8-4 UNSTAINED
13	S15-2514 A8-5 UNSTAINED
14	S15-2514 A8-6 UNSTAINED
15	S15-2514 A8-7 UNSTAINED
16	S15-2514 A8-8 UNSTAINED
17	S15-2514 A8-9 UNSTAINED
18	S15-2514 A8-10 UNSTAINED
19	S15-2514 A9 H&E
20	S15-2514 A9-1 UNSTAINED
21	S15-2514 A9-2 UNSTAINED
22	S15-2514 A9-3 UNSTAINED
23	S15-2514 A9-4 UNSTAINED
24	S15-2514 A9-5 UNSTAINED
25	S15-2514 A9-6 UNSTAINED
26	S15-2514 A9-7 UNSTAINED
27	S15-2514 A9-8 UNSTAINED
28	S15-2514 A9-9 UNSTAINED
29	S15-2514 A9-10 UNSTAINED
30	S15-2514 A10 H&E
31	S15-2514 A11 H&E
32	S15-2514 A12 H&E
33	S15-2514 A12-1 UNSTAINED
34	S15-2514 A12-2 UNSTAINED
35	S15-2514 A12-3 UNSTAINED
36	S15-2514 A12-4 UNSTAINED
37	S15-2514 A12-5 UNSTAINED
38	S15-2514 A12-6 UNSTAINED

Newsome, Tamara

Sample No.	Description
39	S15-2514 A12-7 UNSTAINED
40	S15-2514 A12-8 UNSTAINED
41	S15-2514 A12-9 UNSTAINED
42	S15-2514 A12-10 UNSTAINED
43	S15-2514 A13 H&E
44	S15-2514 A14 H&E
45	S15-2514 A15 H&E
46	S15-2514 A16 H&E
47	S15-2514 A17 H&E
48	S15-2514 A18 H&E
49	S15-2514 A19 H&E
50	S15-2514 A20 H&E
51	S15-2514 A21 H&E
52	S15-2514 B1 H&E
53	S15-2514 B2 H&E
54	S15-2514 B3 H&E
55	S15-2514 B4 H&E
56	S15-2514 B5 H&E
57	S15-2514 B6 H&E
58	S15-2514 B7 H&E
59	S15-2514 B8 H&E
60	S15-2514 B9 H&E
61	S15-2514 C H&E

Pathology Reports
S15-2514
S15-2514 Corrected

Operative Reports
03/23/2015 Operative Report
03/23/2105 Post-operative Report

Genetic Reports
Myriad Genetic Report

Additional Medical
Medical records produced by plaintiff and providers through April 2024

Literature

Ahmed AA, et al. Driver mutations in TP53 are ubiquitous in high grade serous carcinoma of the ovary. J Pathol 2010;221:49-56.

Beddows I, Fan H, Heinze K, Johnson BK, Leonova A, Senz J, Djirackor S, Cho KR, Pearce CL, Huntsman DG, Anglesio MS, Shen H. Cell State of Origin Impacts Development of Distinct Endometriosis-Related Ovarian Carcinoma Histotypes. Cancer Res. 2024 Jan 2;84(1):26-38.

Bell KA, Kurman RJ. A clinicopathologic analysis of atypical proliferative (borderline) tumors and well-differentiated endometrioid adenocarcinomas of the ovary. Am J Surg Pathol. 2000;24:1465-79.

Bennet JA, et al. Mismatch repair protein expression in clear cell carcinoma of the ovary: incidence and morphologic associations in 109 cases. Am J Surg Pathol. 2016;40:656-63.

Bennett JA, Oliva E. Undifferentiated and dedifferentiated neoplasms of the female genital tract. Semin Diagn Pathol. 2021;38:137-151.

Berge W., et al. Genital use of talc and risk of ovarian cancer: a meta-analysis. Eu J of Cancer Prev 2018;27:248-257

Boorman GA, Seeley JA. The lack of an ovarian effect of lifetime talc exposure in F344/NRats and B6C3F1 mice. Reg Toxicol Pharmacol 1995;21:242-243.

Booth M, et al. Risk factors for ovarian cancer: a case-control study. Br J Cancer 1989;60:592-8.

Bulun SE, et al. Endometriosis. Endocr Rev. 2019 Aug 1;40(4):1048-1079.

Buz'Zard AR, Lau BHS. Pycnogenol reduces talc-induced neoplastic transformation in human ovarian cell cultures. Phytother Res 2007;21:579-86.

Camargo, MC, et al. Occupational exposure to asbestos and ovarian cancer: a meta-analysis. Environ Health Perspect 2011;119:1211-1217.

Campion A, et al. Identification of foreign particles in human tissues using raman microscopy. Anal Chem 2018;90:8362-8369.

Carr CJ, Talc: Consumer uses and health perspectives. Reg Toxicol Pharmacol 1995;21:211-215.

Casey MJ, et al. Intra-abdominal carcinomatosis after prophylactic oophorectomy in women of hereditary breast ovarian cancer syndrome kindreds associated with BRCA1 and BRCA2 mutations. Gynecol Oncol 2005;97:457-67.

Chang CJ, O'Brien KM, Keil AP, Goldberg M, Taylor KW, Sandler DP, White AJ. Use of personal care product mixtures and incident hormone-sensitive cancers in the Sister Study: A U.S.-wide prospective cohort. Environ Int. 2024 Jan;183:108298.

Chang S, Risch HA. Perineal talc exposure and risk of ovarian carcinoma. Cancer 1997;79:2396-401.

Chen Y, et al. Risk factors for epithelial ovarian cancer in Beijing, China. Int J Epidemiol 1992;21:23-9.

Clement, P. B., Stall, J. N., & Young, R. H. 1. (2020). Atlas of gynecologic surgical pathology (Fourth edition).

Cook LA, et al. Perineal powder exposure and the risk of ovarian cancer. Am J Epidemiol 1997;145:459¬65.

Cramer DW, et al. Genital talc exposure and risk of ovarian cancer. Int J Cancer. 1999;81(3):351356.

Cramer DW, et al. Ovarian cancer and talc: a case-control study. Cancer 1982;50:372-376.

Cramer DW, et al. The association between talc use and ovarian cancer: a retrospective case control study in two US States. Epidemiol 2016;27:334-346.

Cramer DW, et al., Presence of talc in pelvic lymph nodes of a woman with ovarian cancer and long-term genital exposure to cosmetic talc. Obstet Gynecol 2007;110(2 Pt 2):498-501.

Cramer DW, Xu H. Epidemiologic evidence for uterine growth factors in the pathogenesis of ovarian cancer. Ann Epidemiol 1995;5:310-314.

Cramer DW. Perineal talc exposure and subsequent epithelial ovarian cancer: a case-control study. Obstet Gynecol 1999;94:160-161.

Cramer, DW, Gynecologic Oncology Reports, Correspondence: The association of talc use and ovarian cancer: biased or causal, Gynecologic Oncology Reports, 41 (2022).

Crawford, et al. Perineal powder use and risk of endometrial cancer in postmenopausal women. Cancer Causes Control 2012;23:1673-80.

Dann RB, et al. BRCA1/2 mutations and expression: Response to platinum chemotherapy in patients with advanced stage epithelial ovarian cancer. Gynecol Oncol 2012;125:677-682.

Davis CP, et al. Genital powder use and risk of epithelial ovarian cancer in the ovarian cancer in women of African ancestry consortium. Cancer Epidemiol Biomarkers Prev 2021;30:1660-8

De Boer CH. Transport of Particulate Matter Through the Human Female Genital Tract. J Reprod Fert 1972; 28:295-297.

de Brito T, Franco MF, Granulomatous Inflammation, Rev. Inst. Med. Trop. S. Paulo 1994; 36:185-192.

del Carmen MG, Birrer M, Schorge JO. Carcinosarcoma of the ovary: a review of the literature. Gynecol Oncol. 2012 Apr;125(1):271-7.

Edelstam GAB et al. Retrograde Migration of Starch in the Genital Tract of Rabbits. Inflammation 1997;21:489-499.

Egli GE and Newton M. The Transport of Carbon Particles in the Human Female Reproductive Tract. Fertility and Sterility 1961; 12:151-155.

Emi, T et al. Transcriptomic and epigenomic effects of insoluble particles on J774 macrophages. Epigenetics, 2021, Vol. 16, No. 10, 1053-1070.

Euscher ED. Germ Cell Tumors of the Female Genital Tract. Surg Pathol Clin. 2019 Jun;12(2):621-649.

Fadare O, Parkash V. Pathology of endometrioid and clear cell carcinoma of the ovary. Surg Pathol Clin. 2019;12:529-564.

Fiume MM, et al. Safety assessment of talc as used in cosmetics. Int J Toxicol 2015;34(1 Suppl):665-129S.

Fletcher NM et al., LB-044 – Talcum Powder Enhances Cancer Antigen 125 Levels in Ovarian Cancer Cells and in Normal Ovarian Epithelial Cells; Society for Reproductive Investigation; March 10, 2018.

Fletcher NM et al., Talcum Powder Enhances Oxidative Stress in Ovarian Cancer Cells; Reproductive Sciences Vol. 25, Supplement 1, March 2018; 214A-215A.

Fletcher NM, Harper AK, Memaj I, Fan R, Morris RT, Saed GM. Molecular Basis Supporting the Association of Talcum Powder Use With Increased Risk of Ovarian Cancer. Reprod Sci. 2019 Dec;26(12):1603-1612.

Fletcher NM, Harper AK, Memaj I, Fan R, Morris RT, Saed GM. Molecular Basis Supporting the Association of Talcum Powder Use with Increased Risk of Ovarian Cancer. Reprod Sci. 2020 Oct;27(10):1836-1838. (Response to Mossman).

Food and Drug Administration, Letter from Musser SM to Epstein SS Re: Docket Numbers 94P0420 and FDA-2008-P-0309-0001/CP. Date stamped: April 1, 2014.April 1, 2014 FDA Denial of 1994 and 2008 Petitions.

Frey, M.K., Pothuri, B. Homologous recombination deficiency (HRD) testing in ovarian cancer clinical practice: a review of the literature. Gynaecol Oncol Res Pract 2017;4:4.

Fujiwara M, et al. Prediction of BRCA1 germline mutation status in women with ovarian cancer using morphology-based criteria: identification of a BRCA1 ovarian cancer phenotype. Am J Surg Pathol 2012;36:1170-1177.

Gates MA, et al. Risk factors for epithelial ovarian cancer by histologic subtype. Am J Epidemiol 2010;171:45-53.

Gates MA, et al. Talc use, variants of the GSTM1, GSTT1, and NAT2 genes, and risk of epithelial ovarian cancer. Cancer Epidemiol Biomarkers Prev 2008;17:2436-44.

Gertig DM, Hunter DJ, Cramer DW, Colditz GA, Speizer FE, Willett WC, Hankinson SE. Prospective study of talc use and ovarian cancer. J Natl Cancer Inst. 2000 Feb 2;92(3):249-52.

Gilks B, et al. Distinction between serous tumors of low malignant potential and serous carcinomas based on mRNA expression profiling. Gyn Oncol, 2005; 96:684-694.

Godard B, et al. Risk factors for familial and sporadic ovarian cancer among French Canadians: a case-control study. Am J Obstet Gynecol 1998;179:403-410.

Goff BA, et al. Ovarian carcinoma diagnosis. Cancer 2000;89:2068-2075.

Gonzalez N, et al. Douching, talc use, and risk of ovarian cancer. Epidemiol 2016;27:797-802.

Gossett DR, del Carmen MG. Use of powder in the genital area and ovarian cancer risk: examining the evidence. JAMA 2020;323:29-31.

Green A, et al. Tubal sterilization, hysterectomy and decreased risk of ovarian cancer. Survey of Women's Health Study Group. Int J Cancer 1997;71:948-51.

Gross, et al. A Meta-analytical approach examining the potential relationship between talc. J Exp Anal Eviron Epidemiol 1995;5:181-195.

Gudmundsdottir K., Ashworth A. The roles of BRCA1 and BRCA2 and associated proteins in the maintenance of genomic stability. Oncogene 2006;25:5864-74.

Haber D. Prophylactic oophorectomy to reduce the risk of ovarian and breast cancer in carriers of BRCA mutations. N Engl J Med 2002;346:1660-1662.

Hamilton TC, et al. Effect of talc on the rat ovary. Br J Exp Pathol 1984;65:101-106.

Han LM, et al. DICER-associated tumors in the female genital tract: detection and differential diagnosis. Adv Anat Pathol 2022;29:297-308.

Harlow BL and Hartge PA. A review of perineal talc exposure and risk of ovarian cancer. Regul Toxicol Pharmacol 1995;21:254-60.

Harlow BL, et al. Perineal exposure to talc and ovarian cancer risk. Obstet Gynecol 1992;80:19-26.

Harlow BL, Weiss NS. A case-control study of borderline ovarian tumors: the influence of perineal exposure to talc. Am J Epidemiol 1989;130:390-4.

Harper AK, Wang X, Fan R, Kirsch Mangu T, Fletcher NM, Morris RT, Saed GM. Talcum powder induces malignant transformation in normal human primary ovarian epithelial cells. Minerva Obstet Gynecol. 2023 Apr;75(2):150-157.

Hartge P, et al. Talc and ovarian cancer. JAMA 1983;250:1844.

Health Canada Screening Assessment Report (April 2021)

Heller DS, et al. Asbestos exposure and ovarian fiber burden. Am J Ind Med 1996;29:435-439.

Heller DS, et al. Correlation of asbestos fiber burdens in fallopian tubes and ovarian tissue. Am J Obstet Gynecol 1999;181:346-347.

Heller DS, et al. Presence of asbestos in peritoneal malignant mesotheliomas in women. Int J Gynecol Cancer 1999;9:452-455.

Heller DS, et al. The relationship between perineal cosmetic talc usage and ovarian talc particle burden. Am J Obstet Gynecol 1996;174:1507-1510.

Henderson WJ, et al. Talc and carcinoma of the ovary and cervix. Int J Obstet Gynecol 1971;78:266-272.

Henderson WJ, et al. The Demonstration of the Migration of Talc from the Vagina and Posterior Uterus to the Ovary in the Rat. Environ Res 1986; 40:247-250.

Henderson WJ. Talc in normal and malignant ovarian tissue. Lancet 1979;1(8114):499.

Hogg R, Friedlander M. Biology of epithelial ovarian cancer: implications for screening women at high genetic risk. J Clin Oncol 2004;22:1315-1327.

Houghton SC, et al. Perineal powder use and risk of ovarian cancer. J Natl Cancer Inst 2014; 106;dju208.

Huang JY, et al. Different Influences of Endometriosis and Pelvic Inflammatory Disease on the Occurrence of Ovarian Cancer. Int J Environ Res Public Health. 2021 Aug 19;18(16):8754.

Huncharek M, et al. Perineal application of cosmetic talc and risk of invasive epithelial ovarian cancer: a meta-analysis of 11,933 subjects from 16 observational studies. Anticancer Res 2003;23:1955-1960.

Hunt I, et al. Is talc pleurodesis safe for young patients following primary spontaneous pneumothorax? Interact Cardiovasc Thorac Surg 2007;6:117-20.

Hussein YR, et al. Invasion patterns of metastatic extrauterine high-grade serous carcinoma with BRCA germline mutation and correlation with clinical outcomes. Am J Surg Pathol 2016;40:404409.

International Agency for Research on Cancer (IARC) Monographs on the Evaluation of Carcinogenic Risks to Humans. Arsenic, Metals, Fibres, and Dusts, A Review of Human Carcinogens. Volume 100c, 2012.

International Agency for Research on Cancer (IARC) Monographs on the Evaluation of Carcinogenic Risks to Humans. Carbon, Titanium Dioxide, and Talc. Volume 93 (pp. 1-52, 287-466) 2010.

Irving JA, Young RH, Clement PB. Peritoneum. In Sternberg's Diagnostic Surgical Pathology 6th edition, Mills SE 2015, pp 2672-2673.

Iturralde M and Venter PF. Hysterosalpingo-Radionuclide Scintigraphy (HERS). Sem Nuclear Med 1981; XI(4):301-314.

Johnson, et al., Analytic comparison of talc in commercially available baby powder and in pelvic tissues resected from ovarian carcinoma patients, Gynecologic Oncology, 159 (Nov 2020) 527-533.

Jones MR, et al. Genetic epidemiology of ovarian cancer and prospects for polygenic risk prediction. Gynecol Oncol 2017;147:705-713.

Jordan SJ, et al. Risk factors for benign serous and mucinous epithelial ovarian tumors. Obstet Gynecol 2007;109:647-654.

Karageorgi S, et al. Perineal use of talcum powder and endometrial cancer risk. Cancer Epidemiol Biomarkers Prev 2010;19:1269-1275.

Kauff ND, et al. Risk-reducing salpingo-oophorectomy in women with a BRCA1 or BRCA2 mutation. N Engl J Med 2002;346:1609-15.

Keskin N, et al. Does long-term talc exposure have a carcinogenic effect on the female genital system of rats? An experimental pilot study. Arch Gynecol Obstet 2009;280:925-931.

Kessler II. Cervical cancer epidemiology in historical perspective. J Reprod Med 1974;12:173-185.

Kotsopoulos J, et al. Ovarian cancer risk factors by tumor dominance, a surrogate for cell of origin. Int J Cancer 2013;133:730-739.

Kunz G, et al. Oxytocin – a stimulator of directed sperm transport in humans. Reproductive Biomed Online 2007; 14:32-39.

Kunz G, et al. The dynamics of rapid sperm transport through the female genital tract: evidence from vaginal sonography of uterine peristalsis and hysterosalpingoscintigraphy. Human Reproduction 1996; 11:627-632.

Kunz G, et al. The Uterine Peristaltic Pump, Normal and Impeded Sperm Transport within the Female Genital Tract. The Fate of the Male Germ Cell, edited by Ivell and Holstein, Plenum Press, New York. 1997 at 267-277.

Langseth H, et al. Perineal use of talc and risk of ovarian cancer. J Epidemiol Comm Health 2008;62:358-360.

Laury AR, et al. A comprehensive analysis of PAX8 expression in human epithelial tumors. Am J Surg Pathol 2011;35:816-26.

Leyendecker G, et al. Adenomyosis and endometriosis. Re-visiting their association and further insights into the mechanisms of auto-traumatisation. An MRI study. Arch Gynecol Obstet. 2015;291:917-32.

Li X, et al. Adult-type granulosa cell tumor of the ovary. Am J Cancer Res 2022;12:3495-3511.

Liu AX, et al. Steroid cell tumors, not otherwise specified (NOS), in an accessory ovary: a case report and literature review. Gynecol Oncol 2005;97:260-2.

Longacre TA, McKenney JK, Tazelaar HD, Kempson RL, Hendrickson MR. Ovarian serous tumors of low malignant potential (borderline tumors): outcome-based study of 276 patients with long-term (> or =5-year) follow-up. Am J Surg Pathol. 2005 Jun;29(6):707-23.

Lynch HN, Lauer DJ, Leleck OM, Freid RD, Collins J, Chen K, Thompson WJ, Ierardi AM, Urban A, Boffetta P, Mundt KA. Systematic review of the association between talc and female reproductive tract cancers. Front Toxicol. 2023 Aug 7;5:1157761.

Madariaga A, et al. Tailoring ovarian cancer treatment: implications of BRCA1/2 mutations. Cancers (Basel) 2019;11:416.

Malmberg K, et al. Serous tubal intraepithelial carcinoma, chronic fallopian tube injury, and serous carcinoma development. Virchows Arch 2016;468 :707-713.

Mandarino A, et al. The effect of talc particles on phagocytes in co-culture with ovarian cancer cells. Environ. Res 2020;180:108676.

McCalley MG, et al. Radionuclide Hysterosalpingography for Evaluation of Fallopian Tube Patency. J Nucl Med 1985; 26:868-874.

McCluggage WG, et al. Data set for reporting of ovary, fallopian tube and primary peritoneal carcinoma: recommendations from the International Collaboration on Cancer Reporting (ICCR). Mod Pathol 2015;28:1101-1122.

McDonald SA, Fan Y, Rogers RA, Godleski JJ. Magnesium/silicon atomic weight percent ratio standards for the tissue identification of talc by scanning electron microscopy and energy dispersive X-ray analysis. Ultrastruct Pathol. 2019;43(6):248-260. Epub 2019 Nov 16. PMID: 31736386.

McDonald SA, Fan Y, Welch WR, Cramer DW, Godleski JJ. Migration of Talc From the Perineum to Multiple Pelvic Organ Sites. Am J Clin Pathol. 2019 Oct 7;152(5):590-607.

McDonald SA, Fan Y, Welch WR, Cramer DW, Stearns RC, Sheedy L, Katler M, Godleski JJ. Correlative polarizing light and scanning electron microscopy for the assessment of talc in pelvic region lymph nodes. Ultrastruct Pathol. 2019;43(1):13-27. Epub 2019 Mar 21.

Merritt MA, et al. Talcum powder chronic pelvic inflammation and NSAIDS in relation to risk Int J Cancer 2004;122:170-176.

Micha JP, Rettenmaier MA, Bohart R, Goldstein BH. Talc powder and ovarian cancer: what is the evidence? Arch Gynecol Obstet. 2022 Oct;306(4):931-933.

Mills PK, et al. Perineal talc exposure and epithelial ovarian cancer risk in the Central Valley of California. Int J Cancer 2004;112:458-64.

Mossman B, Letter to the Editor: Fletcher NM, et al; Molecular Basis Supporting the Association of Talcum Powder Use with Increased Risk of Ovarian Cancer; Reproductive Sciences; (2020) https://doi.org/10.1007/s43032-020-00265-9.

Mostafa SA, et al. Foreign body granulomas in normal ovaries. Obstet Gynecol 1985;66::701-702.

Muscat JE and Huncharek MS. Perineal talc use and ovarian cancer: a critical review. Eur J Cancer Prev 2008;17:139-46.

National Cancer Institute, Endometrial Cancer Prevention (PDQ©), Health Professional Version, updated March 15, 2024.

National Cancer Institute, Ovarian, Fallopian Tube, and Primary Peritoneal Cancer Prevention (PDQ©), Health Professional Version, updated March 6, 2024.

Neill AS, et al. Use of talcum powder and endometrial cancer risk. Cancer Causes Control 2012;23:513-519.

Ness R. Does talc exposure cause ovarian cancer? IGCS-0015 Ovarian Cancer. Int J Gynecol Cancer 2015;25(Suppl 1):51.

Ness RB, et al. Factors related to inflammation of the ovarian epithelium and risk of ovarian cancer. Epidemiology 2000;11:111-117.

Nishiura H, et al. Co-existence of malignant squamous cells and herpes simplex virus type 2-infected cells. Gynecol Oncol 1983;15:122-130.

O'Brien KM, D'Aloisio AA, Shi M, Murphy JD, Sandler DP, Weinberg CR. Perineal Talc Use, Douching, and the Risk of Uterine Cancer. Epidemiology. 2019 Nov;30(6):845-852.

O'Brien KM, Ogunsina K, Wentzensen N, Sandler DP. Douching and Genital Talc Use: Patterns of Use and Reliability of Self-reported Exposure. Epidemiology. 2023 May 1;34(3):376-384.

O'Brien KM, Tworoger SS, Harris HR, Anderson GL, Weinberg CR, Trabert B, Kaunitz AM, D'Aloisio AA, Sandler DP, Wentzensen N. Association of Powder Use in the Genital Area With Risk of Ovarian Cancer. JAMA. 2020 Jan 7;323(1):49-59.

O'Brien KM, Tworoger SS, Harris HR, Trabert B, Weinberg CR, Fortner RT, D'Aloisio AA, Kaunitz AM, Wentzensen N, Sandler DP. Genital powder use and risk of uterine cancer: A pooled analysis of prospective studies. Int J Cancer. 2021 Jun 1;148(11):2692-2701.

O'Brien KM, Weinberg CR, D'Aloisio AA, Moore KR, Sandler DP. The association between douching, genital talc use, and the risk of prevalent and incident cervical cancer. Sci Rep. 2021 Jul 21;11(1):14836.

O'Brien KM, Wentzensen N, Ogunsina K, Weinberg CR, D'Aloisio AA, Edwards JK, Sandler DP. Intimate Care Products and Incidence of Hormone-Related Cancers: A Quantitative Bias Analysis. J Clin Oncol. 2024 May 15:JCO2302037. doi: 10.1200/JCO.23.02037. Epub ahead of print.

Oliva E, Sarrió D, Brachtel EF, Sánchez-Estévez C, Soslow RA, Moreno-Bueno G, Palacios J. High frequency of beta-catenin mutations in borderline endometrioid tumours of the ovary. J Pathol. 2006 Apr;208(5):708-13.

Penninkilampi R, et al. Perineal talc use and ovarian cancer: a systematic review and meta-analysis. Epidemiology 2018;29:41-49.

Peres LC, et al. Racial/ethnic differences in the epidemiology of ovarian cancer: a pooled analysis of 12 case-control studies. Int J Epidemiol 2018;47:460-472.

Peres, LC, et al. Racial differences in population attributable risk for epithelial ovarian cancer in the OCWAA consortium. JNCI J Natl Cancer Inst (2021) 113(6)

Perou ML. Iatrogenic foreign body granulomas. A study of selected cases with the polarizing microscope. Int Surg. 1973 Oct;58(10):676-82. PMID: 4582642.

Phillips JC et al. Studies on the Absorption and Disposition of ^{3}H-Labelled Talc in the Rat, Mouse, Guinea-Pig and Rabbit. Food Cosmetic Toxicol 1978; 16:161-163.

Phung MT, et al., Trends of Ovarian Cancer Incidence by Histotype and Race/Ethnicity in the United States 1992-2019. Cancer Res Commun; 3(1) January 2023.

Phung, M., et al., Effects of risk factors for ovarian cancer in women with and without endometriosis, Fertility and Sterility, Vol. 118, No. 5 November 2022.

Piao J, et al. Association between pelvic inflammatory disease and risk of ovarian cancer: An updated meta-analysis. Gynecol Oncol 2020;157:542-548.

Pors J, Segura S, Chiu DS, Almadani N, Ren H, Fix DJ, Howitt BE, Kolin D, McCluggage WG, Mirkovic J, Gilks B, Park KJ, Hoang L. Clinicopathologic Characteristics of Mesonephric Adenocarcinomas and Mesonephric-like Adenocarcinomas in the Gynecologic Tract: A Multi-institutional Study. Am J Surg Pathol. 2021 Apr 1;45(4):498-506.

Purdie D, et al. Reproductive and other factors and risk of epithelial ovarian cancer: an Australian case-control study. Survey of Women's Health Study Group. Int J Cancer 1995;62:678-684.

Rasmussen CB, et al. Pelvic inflammatory disease and the risk of ovarian cancer and borderline ovarian tumors: a pooled analysis of 13 case-control studies. Am J Epidemiol 2017;185:8-20.

Reichert RA. Pathology of the Peritoneum and Extragenital Endometriosis in Diagnostic Gynecologic and Obstetric Pathology: An Atlas and Text 1st Ed (LWW 2012).

Reid A, et al. Does exposure to asbestos cause ovarian cancer? a systematic literature review and meta-analysis. Cancer Epidemiol Biomarkers Prev 2011;20:1287-1295.

Reyes M., et al. Invasion patterns of metastatic high-grade serous carcinoma of ovary or fallopian tube associated with BRCA deficiency. Mod Pathol 2014;27:1405-1411.

Romero I, et al. Morphologic and molecular heterogeneity of epithelial ovarian cancer: therapeutic implications. EJC Suppl 2020 Aug 22;15:1-15.

Rosenblatt K, et al. Genital powder exposure and the risk of epithelial ovarian cancer. Cancer Causes Control 2011;22:737-742.

Rosenblatt KA, et al. Mineral fiber exposure and the development of ovarian cancer. Gynecol Oncol 1992;45:20-5.

Saed GM et al., Updates of the role of oxidative stress in the pathogenesis of ovarian cancer; Gynecologic Oncology 145 (2017) 595-602.

Sato, et al., Analysis of particles from hamster lungs following pulmonary talc exposures: implications for pathogenicity, Particle and Fibre Toxicology (2020).

Schildkraut JM, et al. Association between body powder use and ovarian cancer: the African American Cancer Epidemiology Study (AACES). Cancer Epidemiol Biomarkers Prev 2016;25:1411-1417.

SEER Cancer Stat Facts: Ovarian Cancer. National Cancer Institute. Bethesda, MD, https://seer.cancer.gov/statfacts/html/ovary.html, accessed April 2024.

Shah KK, et al. Histopathologic review of granulomatous inflammation. J Clin Tuberc Other Mycobact Dis 2017;7:1-12.

Shalaby A, Shenoy V. Female Adnexal Tumor of Probable Wolffian Origin: A Review. Arch Pathol Lab Med. 2020 Jan;144(1):24-28.

Shannon KM, et al. Which individuals undergoing BRACA analysis need BART testing? Cancer Genet 2011;204:416-422.

Shen CC, et al. Risk of uterine, ovarian and breast cancer following pelvic inflammatory disease: a nationwide population-based retrospective cohort study. BMC Cancer. 2016 Nov 3;16(1):839.

Shukla A, et al. Alterations in gene expression in human mesothelial cells correlate with mineral pathogenicity. Am J Respir Cell Mol Biol 2009;41:114-123.

Simons M, et al. Two types of primary mucinous ovarian tumors can be distinguished based on their origin. Mod Pathol 2020; 33:722-733.

Singh N, et al. Assignment of primary site in high-grade serous tubal, ovarian and peritoneal carcinoma: a proposal. Histopathology 2014;65:149-154.

Singh N, et al. The secondary mullerian system, field effect, BRCA, and tubal fimbria: our evolving understanding of the origin of tubo-ovarian high-grade serous carcinoma and why assignment of primary site matters. Pathology 2015;47:423-431.

Singh N, Gilks CB, Hirschowitz L, Kehoe S, McNeish IA, Miller D, Naik R, Wilkinson N, McCluggage WG. Primary site assignment in tubo-ovarian high-grade serous carcinoma: Consensus statement on unifying practice worldwide. Gynecol Oncol. 2016 May;141(2):195-198. Epub 2016 Jan 28.

Singh N, Gilks CB, Hirshowitz L, Wilkinson N, McCluggage WG. Adopting a Uniform Approach to Site Assignment in Tubo-Ovarian High-Grade Serous Carcinoma: The Time has Come. Int J Gynecol Pathol. 2016 May;35(3):230-7.

Sjösten ACE, et al. Retrograde migration of glove powder in the human female genital tract. Human Reprod 2004; 19:991-995.

Slomovitz B, et al. Asbestos and ovarian cancer: examining the historical evidence. Int J Gynecol Cancer 2021;31:122-128.

Smith JW. Herpes simplex virus. An expanding relationship to human cancer. J Reprod Med 1983;28:116-122.

Song H, et al. The contribution of deleterious germline mutations in BRCA1, BRCA2 and the mismatch repair genes to ovarian cancer in the population. Hum Mol Genet 2014;23:4703-4709.

Soslow R., et al. Morphologic patterns associated with BRCA1 and BRCA2 genotype in ovarian carcinoma. Mod Pathol 2012;25:625-636.

Stewart LM, et al. Risk of high-grade serous ovarian cancer associated with pelvic inflammatory disease, parity and breast cancer. Cancer Epi 2018;55:110-116.

Taher MK, et al. Critical review of the association between perineal use of talc and risk of ovarian cancer. Reproductive Toxicology 2019;90:88-101.

Talia KL, Parra-Herran C, McCluggage WG. Ovarian mucinous and seromucinous neoplasms: problematic aspects and modern diagnostic approach. Histopathology. 2022 Jan;80(2):255-278.

Terry KL, et al. Genital powder use and risk of ovarian cancer: a pooled analysis of 8,525 cases and 9,859 controls. Cancer Prev Res (Phila) 2013;6:811-821.

Thompson KE, et al. Assessment of cervical passage of vital dyes in pregnant, nonpregnant, and mated rats and mice. Reprod Toxicol 2016; 59:1-7.

Tiourin E, et al. Tubal ligation induces quiescence in the epithelia of the fallopian tube fimbria. Reprod Sci 2015;22:1262-1271.

Tischkowitz M, Huang S, Banerjee S, Hague J, Hendricks WPD, Huntsman DG, Lang JD, Orlando KA, Oza AM, Pautier P, Ray-Coquard I, Trent JM, Witcher M, Witkowski L, McCluggage WG, Levine DA, Foulkes WD, Weissman BE. Small-Cell Carcinoma of the Ovary, Hypercalcemic Type-Genetics, New Treatment Targets, and Current Management Guidelines. Clin Cancer Res. 2020 Aug 1;26(15):3908-3917.

Tomasetti C et al. Cell division rates decrease with age-providing a potential explanation for the age-dependent deceleration in cancer incidence. PNAS (2019) Vol. 116, No. 41, 20482-20488.

Tomasetti C et al. Role of stem-cell divisions in cancer risk. Nature (2017) Vol. 548, E13-E15.

Tomasetti C et al. Stem cell divisions, somatic mutations, cancer etiology and cancer prevention. Science 355, 1330-1334 (2017).

Tomasetti C et al., Variation in cancer risk among tissues can be explained by the number of stem cell divisions. *Science*; 347, 78 (2015).

Tomasetti C. Mutated clones are the new normal. Science (2019) Vol. 364, Issue 6444, 938-939.

Toss A, et al. Hereditary ovarian cancer: not only BRCA 1 and 2 genes. Biomed Res Int 2015;2015:341723.

Tran TH, Egilman D. Response to Micha et al. (2022) talc powder and ovarian cancer: what is the evidence? Arch Gynecol Obstet. 2023 Dec;308(6):1907-1908.

Tzonou A, et al. Hair dyes, analgesics, tranquilizers and perineal talc application as risk factors for ovarian cancer. Int J Cancer. 1993;55:408-10.

Vang R, et al. Molecular alterations of TP53 are a defining feature of ovarian high-grade serous carcinoma: a rereview of cases lacking TP53 mutations in The Cancer Genome Atlas Ovarian Study. Int J Gynecol Pathol 2016;35:48-55.

Vang R, et al. Serous borderline tumour of the ovary, pp 38-42. In Lyon (France), International Agency for Research on Cancer, 2020 (WHO classification of tumours series, 5th ed; vol 4).

Venter PF and Iturralde M. Migration of a Particulate Radioactive Tracer from the Vagina to the Peritoneal Cavity and Ovaries. South African Med J 1979;55:917-919.

Virani, S. et al. Joint IARC/NCI International Cancer Seminar Series Report: expert consensus on future directions for ovarian carcinoma research. Carcinogenesis 42, 785-93 (2021).

Visvanathan K, et al. Fallopian tube lesions in women at high risk for ovarian cancer: a multicenter study. Cancer Prev Res (Phila) 2018;11:697-706.

Vonsky M, et al. Carcinogenesis associated with human papillomavirus infection. mechanisms and potential for immunotherapy. Biochemistry (Mosc) 2019;84:782-799.

Warnnissorn M, Watkins JC, Young RH. Dysgerminoma of the ovary: an analysis of 140 cases emphasizing unusual microscopic findings and resultant diagnostic problems. Am J Surg Pathol 2021;45:1009-1027.

Wehner AP and Weller RE. On Talc Translocation from the Vagina to the Oviducts and Beyond. Food Chem Toxic 1986;24:329-338.

Wehner AP, et al. Do Particles Translocate from the Vagina to the Oviducts and Beyond? Food Chem Toxic 1985;23:367-372.

Wentzensen, N and O'Brien K. Talc, body powder, and ovarian cancer: A summary of the epidemiologic evidence. Gynecol Oncol. 2021 Oct;163(1):199-208.

Whittemore AS, et al. Personal and environmental characteristics related to epithelial ovarian cancer. II. Exposures to talcum powder, tobacco, alcohol, and coffee. Am J Epidemiol 1988;128:1228-40.

Wong C, et al. Perineal talc exposure and subsequent epithelial ovarian cancer: a case-control study. Obstet Gynecol 1999;93:372-376.

Woolen S, et al. Association between the frequent use of perineal talcum powder products and ovarian cancer: a systematic review and meta-analysis. J Gen Intern Med 37(10):2526-32; Aug. 2022

Wu AH, et al. African Americans and Hispanics remain at lower risk of ovarian cancer than non-Hispanic Whites after considering non-genetic risk factors and oophorectomy rates. Cancer Epidemiol Biomarkers Prev 2015;24:1094-1100.

Wu AH, et al. Markers of inflammation and risk of ovarian cancer in Los Angeles County, 2009: Int J Cancer 2009;124:1409-1415.

Ye S, et al. Comparison of pure and mixed-type clear cell carcinoma of the ovary: a clinicopathological analysis of 341 Chinese patients. Int J Gynecol Cancer. 2014;24:1590-6.

Young RH, Wong A, Stall JN. Yolk sac tumor of the ovary: a report of 150 cases and review of the literature. Am J Surg Pathol 2022;46:309-325.

Young RH. Ovarian sex cord-stromal tumours and their mimics. Pathology 2018;50(1):5-15.

Zannoni L, Del Forno S, Raimondo D, Arena A, Giaquinto I, Paradisi R, Casadio P, Meriggiola MC, Seracchioli R. Adenomyosis and endometriosis in adolescents and young women with pelvic pain: prevalence and risk factors. Minerva Pediatr (Torino). 2024 Feb;76(1):57-63. Epub 2020 Jun 16.

Zhang JJ, et al. Ovarian metastasis from nongynecologic primary sites: a retrospective analysis of 177 cases and 13-year experience. J Ovarian Res 2020;13:128.

Zhou Z, et al. Pelvic inflammatory disease and the risk of ovarian cancer: a meta-analysis. Cancer Causes Control 2017;28:415-428.

Case Materials

Complaint (12/13/2018)
Amended Complaint (01/30/2019)
Plaintiff Profile Form (07/08/20)

Plaintiff Expert Reports
Daniel Clarke-Pearson, MD
John J Godleski, MD

Expert Depositions
John J Godleski, MD (03/28/24, 03/29/24, 04/19/24)

Fact Depositions
Albert Steren, MD (02/17/2021)
Daniel Francois Jr. (05/13/2021)
Ravid Garg, MD (02/04/2021)
Tamara Newsome (12/09/2020)